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# ***JPRS Report***

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## **Soviet Union**

### ***Economic Affairs***

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### SPECIAL NOTICE

Effective 1 June 1987 JPRS reports will have a new cover design and color, and some reports will have a different title and format. Some of the color changes may be implemented earlier if existing supplies of stock are depleted.

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The changes that are of interest to readers of this report are as follows:

USSR reports will become SOVIET UNION reports.

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The USSR REPORT: POLITICAL AND SOCIOLOGICAL AFFAIRS will be titled SOVIET UNION/POLITICAL AFFAIRS (UPA).

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## STATE ACCEPTANCE PROCEDURES, SANCTIONS, DETAILED

Moscow KHOZYAYSTVO I PRAVO in Russian No 1, Jan 87 pp 47-52

[Article by L. Broslavskiy, sector chief in the VNII for Establishment of Standards of Gosstandart and candidate of juridical sciences: "Product Quality: State Monitoring, Penalties"]

[Text] State monitoring of product quality is done by the USSR State Committee for Standards (Gosstandart). It is responsible for state enforcement of standards and measuring devices.

The new form of monitoring product quality is called state acceptance. The special agency for extradepartmental monitoring--state acceptance, which is subordinate to Gosstandart, has been created in order to radically improve the quality of products produced, to perform acceptance of finished products, and to oversee the activity of enterprises on matters of quality. State acceptance was instituted as of 1 January 1987 in associations and enterprises manufacturing the most important products of the national economy, consumer goods, and also principal components and materials for them. The list of associations and enterprises in which state acceptance is to be introduced is proposed by Gosstandart after agreement with the respective ministries and departments, and it is approved by the USSR Council of Ministers.(1)

The System of State Oversight and the Powers of the Agencies Which Exercise It. The principal tasks of the state oversight [gosnadzor] of Gosstandart is to see that ministries, departments, enterprises, organizations, and institutions promptly introduce and strictly observe standards, technical specifications (TU's), designs (models), and the rules of metrology, to guarantee the uniformity of measurements in the country, and also to analyze the scientific-technical level of standards and measuring equipment and to promote in their development the fullest use of the advances of science and technology in order to strengthen the efficiency of social production, to accelerate scientific-technical progress, to raise labor productivity, and to boost the technical level and quality of the product.(2)

The system of agencies for state oversight is made up of Gosstandart (represented by the administrations of the central headquarters, which are responsible for organizing and directing state oversight), republic administrations (RU's) in the union republics and their subordinate centers for the setting of

standards and metrology (TsSM's), as well as laboratories for state oversight of standards and measuring equipment (LGN's), which are in operation in all the autonomous republics, krais, oblasts, and major industrial centers.

The deputy chairman of Gosstandart, who is responsible for matters of state oversight, is the chief state inspector of the USSR for oversight of standards and measuring equipment, while his deputies are the chiefs of administrations of Gosstandart, which are responsible for exercising state oversight. The chiefs of the RU's, the directors of the TsSM's, and the chiefs of the LGN's are chief state inspectors for oversight of standards and measuring equipment in the union and autonomous republic, kray, oblast, and city, respectively, and their deputies are deputies of the respective chief state inspectors. The other officials of these agencies which are responsible for carrying out state oversight are at the same time state inspectors for standards and measuring equipment by virtue of their position.

The principal form of state oversight is the inspection conducted right in the enterprise. The plans call for bringing the number of state oversight operations up to 80,000 inspections in 1990. Principal attention is paid to products certified in the superior-quality category. Plans call for conducting inspections of all products before certification for the state Quality Emblem (GZK) and for annual inspection of all products in the superior-quality category in the production process.

Officials of agencies for the state oversight of Gosstandart possess the following specific powers:

- i. to prohibit the release (including release from repairs), sale, transport, storage, and use of a product which violates the rules of normative-technical documents (NTD);
- ii. to prohibit transfer to the customer and use of mechanical engineering, process engineering, and design documentation which does not meet the requirements of standards if it could result in a drop of the technical level and quality of products (this power is vested in the chief state inspectors);
- iii. to issue prescriptions on correcting violations of NTD and the causes giving rise to them which are binding upon enterprises;
- iv. to issue orders to apply economic penalties against enterprises according to established procedure;
- v. to institute a special regime for acceptance of finished products according to a procedure to be set forth by Gosstandart;
- vi. to issue to enterprise officials enforceable orders to halt production of products when there are violations of NTD at those enterprises until the violations are corrected.

If an inspection reveals that a product lot which has been inspected does not meet the requirements of the NTD, the state inspector shall issue the enterprise an order prohibiting its delivery (sale). In cases when the organization

and state of production do not guarantee the manufacturing of a product in accordance with the established requirements, delivery (sale) of all products of a particular designation (type, model, grade, design, and so on) shall be prohibited. The order imposing that prohibition shall be issued by the chief state inspector. This may prohibit both delivery of the finished product and also use of raw materials, supplies, intermediate products, and components which do not meet the requirements of the NTD.

Performance of measures to correct violations of the NTD and to execute orders issued shall be checked in subsequent inspections. If the violations discovered earlier and the causes giving rise to them have been corrected, delivery (sale) of the product shall be allowed.

In case of a regular violation of the NTD a special inspection procedure shall be instituted--complete inspection of the product of a particular designation produced as to quality. The state inspector shall check every lot accepted by the OTK and accompanied by the special record on submittal for inspection. If the product lot does not meet the requirements of the NTD, it shall be returned for additional work. The period of validity of the special regime shall be established for a definite period of time (but not to exceed 2 months) sufficient to carry out the measures to correct the violations of the NTD and their causes.

In April 1986 the Latvian republic administration instituted a special acceptance regime at the "RAF" pilot plant for making buses. During the first several days practically all the vehicles coming off the assembly line were sent back for additional work. Then the situation began to stabilize. At the same time the special regime was instituted, penalties were invoked against the plant, and the Quality Emblem was revoked. All of this made it possible to achieve favorable results.

If the measures outlined in the special regime are not performed, and the conditions indispensable to stable output of a product of requisite quality do not exist at the enterprise, a decision to halt production may be taken. Termination of production of the product (prohibition in the stage of manufacturing, but not delivery) is an exceptional coercive measure which may be taken only by the chief state inspectors of the USSR and the union republics and their deputies.

The decision to halt production is taken on the basis of the record of inspection during which cases of violation of standards and rules of metrology were discovered because the enterprise lacks the conditions necessary for production of a product of the requisite quality. Production may be resumed only after correction of the causes of the rejects and creation of conditions for production of a product of the requisite quality. On the basis of the record of the subsequent inspection the chief state inspector of the USSR (union republic) shall issue the appropriate permission.

Gosstandart also is entitled to make decisions to revoke or limit the period of validity of NTD or review of NTD at the sector or republic level on matters of standardization and metrology when it does not meet the requirements of

improving product quality or when it contradicts state standards in effect; to deprive enterprises of the right to use the GZK when conditions for state certification of product quality are violated. In 1985 Gosstandart removed the GZK from 2,954 articles on the basis of the results of state oversight. Most of them were from the enterprises of Minpribor, Minelektrotekhprom, and Minstankoprom.

Economic penalties invoked against enterprises for selling products manufactured with deviations from standards and TU's have a special role to play in combating deliveries of substandard products. These products are omitted from report data on fulfillment of plans, and the entire profit obtained from them is confiscated into the budget.(3)

The GKNT, USSR Minfin, USSR TsSU, Gosstandart, and USSR Goskomtsen adopted on 12 July 1983 the Statute on Procedure for Imposing Economic Penalties for Violation of Standards and Technical Specifications.(4) It extends to all state enterprises and also cooperative and other socialized enterprises, associations, organizations, and institutions. The right to impose the economic penalties has been vested in the state oversight agencies of Gosstandart as well as agencies for departmental and interdepartmental product quality inspection.

Economic penalties are applied against manufacturing enterprises only on substandard products which have been sold (paid for) to the customer (recipient). The facts of its sale are established according to the results of inspections at enterprises, from the records of workshops which repair products under warranty, decisions of arbitration authorities on the substandard quality of products delivered, and the information of institutions of USSR Gosbank on customer refusal to pay and on write-offs of the value of products of substandard quality which have been paid for.

In cases when inspection on the supplier's premises reveals a substandard product that has been manufactured and placed in the warehouse, a ban is issued on its shipment. Economic penalties may be imposed only on analogous products sold previously if the materials of the inspection prove that it did not meet the requirements as to quality or completeness set forth in standards, TU's, or designs (models).

Arguments of the managers of enterprises being inspected to the effect that the product can be used for its specific purpose in spite of the defects discovered are not valid. Economic penalties must be imposed regardless of whether the substandard product can be used--without reworking or correction of defects.

Procedure for Invoking Economic Penalties Against Enterprises (Associations) in Industry. Enterprises are required to transfer into budget revenues the entire amount of profit actually obtained as a result of selling substandard products. This amount of profit is paid into the budget no later than the 20th of the month following the month in which the violation was committed.

Economic penalties invoked against enterprises in the food industry which are selling substandard products containing departures from recipes, but suitable for the specified purpose, contain certain peculiarities. What is paid into

the budget is not the profit, but the total amount of saving achieved in the product's production because a less expensive (lower quality) raw material was used. The saving is determined on a quarterly basis for specific products by comparing actual costs to the planned costs projected on the basis of the allowances incorporated in standards, TU's, and recipes. The total saving is paid into the union budget no later than the 15th of the month following the quarter covered by the report.

Enterprises may not include in reports on fulfillment of the sales plan products in physical and value terms which do not conform to the provisions of the NTD. Products are omitted from reports according to a procedure established by USSR TsSU in the Model Instruction on Compiling Reports of Production Associations (Combines) and Industrial Enterprises. No later than 10 days after the amount of profit has been sent to the budget and corrections made in reports on plan fulfillment the enterprises shall send the relevant correction to the regional authority of Gosstandart and to the ministry (department).

If these requirements are not met, agencies for oversight (inspection) shall issue to the enterprise and also to the financial authority and state statistical authority (on the basis of geographic jurisdiction over the enterprise) enforceable orders on confiscation of the profit, which is to be paid into the budget, and on making the corrections in reports on plan fulfillment. The document drawn up by the inspectorate concerning the results of the inspection or the final decision of arbitration or a court shall serve as the basis for this. Copies of the order and the document used as the basis for issuing it shall be sent to the ministry (department) to which the enterprise is subordinate.

The right to invoke economic penalties in the Gosstandart system has been vested in the chief state inspectors for enforcement of standards and measuring equipment and their deputies.

Economic penalties shall be invoked for the sale of substandard products which are included in reports on fulfillment of the plan for the current year and previous year. By contrast with penalties in civil law, they are not fixed in amount. The amount needs to be determined as a function of the volume of sales of the substandard product over a particular period of time preceding the inspection.

The document which is the basis for issuing the order must contain the following:

- i. the nature of the violation (the parameters and indicators for which the product does not meet the requirements of the NTD, the magnitude of deviations from them, and their effect on product quality);
- ii. the period over which violation of the NTD was committed;
- iii. the volume of the product not meeting standards in physical and value terms (in prices and rates adopted for determining the respective indicators subject to correction);

iv. the absence of equipment for performing manufacturing operations that would guarantee the requisite product quality;

v. the use of manufacturing jigs and fixtures, equipment, and tools which are not in proper condition or are unsuitable and also the use of raw materials, supplies, and components which do not meet NTD and eliminate the possibility of manufacturing a product of the requisite quality.

When an inspection is made on the premises of the manufacturer the cause-and-effect relationship needs to be established between the violations enumerated and the substandard nature of the product, and evidence should be presented that a particular violation caused certain indicators of quality or completeness of the product to depart from the requirements of the NTD over a specified period of time. Uncontestable evidence that manufacturing enterprises have been selling poor-quality products may specifically be the use of mechanical engineering, process engineering, and design documentation which does not meet the NTD; the absence of equipment for performing processing operations that would guarantee the requisite product quality; the use of manufacturing jigs and fixtures, tools, and equipment which are not in proper condition or are unsuitable, etc.

In November 1985 Gosstandart conducted an inspection of the quality of mini-motorcycles at the Lvov Motorcycle Plant, which revealed that they did not meet the requirements of the NTD. One of the principal reasons was the substandard quality of the V-50 engines manufactured and delivered by Shyaulay Bicycle Motor Plant. On the basis of the results of that inspection economic penalties were invoked against the plant, all the substandard engines delivered to the Lvov Motorcycle Plant were deducted in their full amount from reports on plan fulfillment.

It is not uncommon for disputes to arise in practice concerning the legitimacy of invoking economic penalties for a past reporting period and especially for the previous year. Is it possible to correct a plan when the results have not yet been totaled up? Point 6 of the Statute provides that corrections in the report on plan fulfillment are made by enterprises for the reporting period in which the order was received.

Confiscation into the budget of the amount of profit indicated in the order is done by financial authorities through the bank institution where the account of the enterprise which is the offender is kept, and no recourse is allowed. A penalty in the amount of 0.5 percent of the amount to be paid into the state budget is imposed for every day of delinquency. The penalty is invoked from the date when the enterprise is required to pay the amount of profit into the budget which it has obtained from selling the substandard product. Financial authorities are required to inform the oversight agency which has issued the order concerning the confiscation of that amount.

The situation is different with the corrections to be made in reports on plan fulfillment. This is the duty of the enterprises themselves which are the offenders. Ministries (departments) and inspection agencies make a quarterly check of execution of orders to make corrections in reports on plan fulfillment. At the same intervals state statistics authorities are required to



inform the inspection agencies on the enterprise's execution of the order issued to it. The enterprise sends the document to the effect that corrections have been made in reports on plan fulfillment to the inspection agency within a period of 10 days.

If an enterprise corrects defects in a product which has been sold and has been omitted from reports by order of inspection agencies, it has the right to include it in reports on fulfillment of the plan according to the procedure set forth by the USSR TsSU. Here the profit which has been confiscated as a budget revenue is not subject to refund.

Economic penalties are not applied if, first, the USSR Council of Ministers, or councils of ministers of union republics by its order, has permitted that farm products be sold which contain departures from requirements of standards concerning quality provided the appropriate discounts as to prices and weights are applied; second, if the enterprise has a duly issued permit for temporary departure from the requirements of the NTD.

In practice cases occur when over a particular period of time enterprises manufacture and sell products which depart from certain requirements of the NTD, and then they obtain a duly issued permission for this. Economic penalties are applied to the sale of substandard products during the period preceding issuance of that permit.

An appeal may be filed against unwarranted application of economic penalties during a period of 10 days with the superior inspection agency. The appeal is to be ruled on no later than 30 days from the date when it is filed. Receipt of an appeal does not stay execution of the order.

The refunding of amounts of profit improperly credited to the budget is done by financial authorities on the basis of the decision of the inspection agency which has revoked the application of economic penalties, unless a period of 1 year has passed since the date when they were credited to the budget.

Profit paid into the budget is not counted in evaluating the performance of enterprises (in totaling up the results of socialist competition, for transfers to economic incentive funds and other funds formed out of profit, and so on). In evaluation of fulfillment of the profit plan actual balance-sheet profit must be reduced by the amounts paid into the budget, and if the enterprise is operating at a loss, then it is added to the losses.

The elimination of a product from reports or its noninclusion in reports on plan fulfillment in physical and value terms does not directly affect the enterprise's financial condition, since the actual value of substandard products sold is not confiscated from it. But it may result in nonfulfillment of the planning indicators on which the financial results of the enterprise's economic performance depend. On the basis of material from Gosstandart agencies institutions of USSR Gosbank issue funds for wages so as to take into account corrections of report figures on fulfillment of plans for products manufactured with deviations from the NTD.



Penalties whose imposition has been vested in Gosstandart by Decree No 695 of the CPSU Central Committee and USSR Council of Ministers on 12 July 1979 and entitled "On Improving Planning and Strengthening the Influence of the Economic Mechanism on Increasing Production Efficiency and Work Quality" constitute an independent type of economic penalties. When violations of requirements concerning certification and the superior category of product quality are found, the Gosstandart agency (in addition to removing the state Quality Emblem from the product) also issues to the enterprise enforceable orders on reducing by the amount of supplements to prices for those products transfers made to economic incentive funds since the beginning of the year in which the violations were detected, orders on omitting the product from report data on fulfillment of the plan for products in the superior-quality category.

These penalties have certain specific features. First, the period of their validity is limited to the current year. Second, they are invoked for violation both of requirements concerning product quality and also violations of certification procedure (for example, a product is labeled with the GZK at a time when the decision of the GAK and corresponding certificate have not been recorded or have been recorded, but have not yet been received by the enterprise; a product is marked with the GZK and included in reports after the validity of the certificate has expired).

If as a result of an inspection a product in the superior-quality category is found to be substandard, the profit actually obtained and amounts obtained on the basis of incentive supplements to the price shall be paid into the budget. Moreover, the product shall be eliminated from all report data, including reports on fulfillment of the plan for products in the superior-quality category. These penalties have been invoked, for example, against the Kiev "Krasnyy Ekskavator" Production Association.

In case of detection of cases of violations of standards for which economic penalties have been provided, oversight and inspection agencies are required to invoke them in all cases and to the full extent. In their juridical nature economic penalties are measures in administrative law and financial law whose purpose is to bring about a restoration of lawfulness; applying them does not preclude imposition on the manufacturer (supplier) of a penalty in civil law for delivering products of substandard quality.

#### FOOTNOTES

1. Decree of the CPSU Central Committee and USSR Council of Ministers dated 12 May 1986 and entitled "On Measures for Radical Improvement of Product Quality" (SP SSSR, No 24, 1986, Item 139).
2. Statute on State Oversight of Standards and Measuring Equipment in the USSR (Point 1), approved by Decree No 936 of the USSR Council of Ministers on 28 September 1983 (SP SSSR, No 28, 1983, Item 157).
3. Decree No 937 of the CPSU Central Committee and USSR Council of Ministers dated 10 November 1970 and entitled "On Increasing the Role of Standards in Improving the Quality of Products Produced" (SP SSSR, No 20, 1970, Item 154).

Economic penalties have been invoked since 1981 not only against enterprises and associations in the industrial sector, but also against project planning and design and scientific research organizations, enterprises which operate as developers--related to development of products, against agricultural, procurement, and retail trade organizations and enterprises--in connection with the sale and storage of products, against transportation enterprises--in connection with shipment of products, against enterprises and institutions in the service sector--in connection with the rendering of services (Decree No 612 of the CPSU Central Committee and USSR Council of Ministers dated 30 June 1981 and entitled "On Strengthening the Effort Toward Conservation and Optimum Use of Raw Materials, Fuel and Energy Resources, and Other Physical Resources").

4. BYULLETEN NORMATIVNYKH AKTOV MINISTERSTV I VEDOMSTV SSSR, No 1, 1984, pp 3-8.

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## STATE ACCEPTANCE IMPLEMENTATION REVEALS MAJOR PROBLEMS

## Survey Highlights Problems

Kiev RABOCHAYA GAZETA in Russian 18 Feb 87 p 2

[Article by I. Naumenko, Kiev: "Five Problems With the Five-Sided Emblem"; first 6 paragraphs are source introduction]

[Text] What Did the Poll Show?

The state Quality Emblem is today becoming a symbol of the competitiveness of domestic industrial products on the international market. Agencies of USSR Gosstandart revoke the right to label their products with the honorific pentagon without question when the products do not meet the highest world technical level. But the task facing our industry, as noted at the November (1986) Conference held in the headquarters of the CPSU Central Committee on the problem of product quality, lies in seeing that all the products produced exceed or at least meet the best world models. State acceptance of products, which was instituted at 300 enterprises in our republic as of 1 January 1987, is supposed to promote this.

Even the very first steps of state acceptance, as shown by a poll taken by RABOCHAYA GAZETA, have confronted the collectives of industrial enterprises with a number of problems and have shed light on the quality effort from a new angle.

In today's issue we have attempted to summarize these problems on the basis of our survey, whose questions were answered by workers and brigade leaders, by engineers and managers of work collectives, and by representatives of state acceptance. Let us run down the questions:

1. How do you evaluate the technical level of your products?
2. Have conditions been created at your enterprise for manufacturing a high-quality product? What still needs to be done?
3. Your claims against suppliers. How can the interaction among related producers be improved?

## 1. A Benchmark

"I will speak frankly: I do not know whether the quality of our product is up to the best world models or not." This, we recall, was the answer to the first question of the survey given by S. Filatov, setupman in the section of the automatic piston production line in the first machine shop of the "Porshen" Plant of the "Kharkovtraktorozapchast" Association.

As the survey showed, it is not just the workers, but also many engineers and business executives of industrial enterprises who do not have a clear idea of what the ideal technical characteristics of the products they are producing ought to be.

"This conclusion," said I.G. Kritskiy, deputy chief of the republic administration of USSR Gosstandart, in sharing his observations, "is not so paradoxical as it might seem at first glance. If the developers of industrial products have at hand not only advertising prospectuses, but also samples of the best foreign counterparts, until recently production people did not feel that that kind of knowledge was mandatory or even necessary at all.

"At present, you know, representatives of state acceptance are simply dreaming if they think that in the offices of the directors of our enterprises, the chief engineers, and the shop chiefs there are charts of the technical level of the best world models hanging on the wall to promote the campaign. It would not be a bad idea to have in the shops and at work stations comparative charts of the technical characteristics of what we ourselves are making and what is being made by others. I think graphics like that would have a strong effect on morale in the fight for quality."

It is hard not to agree with such wishes. It is one thing to talk about quality abstractly, to adhere to dry GOST's, which themselves do not always meet present-day requirements by any means, and something else to see a specific goal in front of you, a benchmark to aim for and to pass. Like it or not, pride will come into play: Are we really not as good? Can't we do it?

In short, charts of the technical level of products produced at every particular enterprise compared to the best domestic and foreign examples should become an integral part of the productive life of work collectives. Just like the board showing the results of competition, just like the schedules showing the pace of operation of the shops, etc.

This is elementary logic. It is half the battle just to state the problem clearly. And if the setupman S. Filatov and his work fellows have a clear idea why the pistons of the tractor engines of the Kharkov plant are not as good as the pistons of the English or Japanese firms, they will undoubtedly make an effort on their own and will call upon their own supervisors to do everything possible and impossible so that their products exceed the quality of the world models.

## 2. A Bad Product Is Also a Losing Product

When the worker and the director and also representatives of state acceptance concur in a single voice as to the insufficient technical level of the products being produced by an enterprise--and this kind of unanimity showed up in all the answers to our survey--this kind of frankness and self-criticism of evaluations cannot but be impressive. But, as they say, what comes next? Take, for example, two completely different products--the "Mayak 233" tape recorder produced by the Kiev "Mayak" Plant and the LAZ-42021 bus of the Lvov Bus Plant. What they have in common in a certain regard is far more than it might appear. First, they are innovations. The LAZ-42021 bus, we learned during the survey, was supposed to completely replace the outdated models with gasoline engines. The "Mayak 233" was put into series production only last year. Second, both models are far from perfection. Third and last, the developers, ministries, and enterprise managers and engineers knew about the defects of the models long before they were put into production.

The fact that they nevertheless went into production does not fit into the framework of ordinary logic, if we might put it that way. Before I. Radchenko, who today rightly and categorically states that the tape recorder model "Mayak 233" does not meet the present-day technical level, became the director of state acceptance at the Kiev "Mayak" Plant, he was the chief engineer of the design bureau in which the model was developed! In response to the question of why they still put it into production, I. Radchenko spread his hands significantly.... And in the survey A. Maslak, director of the Lvov Bus Plant, placed the full and entire blame...on VKEIavtobusprom. V. Tsibrukh, deputy chief engineer of the "Mayak" Plant, expressed himself in more definite terms:

"The upper levels, you know, have been demanding that products be updated...." That is all true. It is possible that some official or even group of officials in the ministry had to put a "check mark" in a report as to the new models of products that have been put into production. But why must the collectives of enterprises and their management concur with those demands? Why is this? Fear of getting into a conflict? Let us call things by their right names. This lack of principle is amoral at its very core. It is incompatible with such ethical categories as the probity and dignity of the Soviet leader, the pride of the engineer, not to mention what all of this costs the state. If we translate lack of economic principle to the purely economic plane, it runs upward of 10 million rubles of losses. And what is the effect on the mind of the workingman when he is forced with his own hands to produce a product that is lagging behind from the technical standpoint?

No, it is no accident that at the January (1987) Plenum of the CPSU Central Committee they stressed that today each of us must begin the restructuring within himself. Working in the new way--vigorously and creatively--means working conscientiously.

But let us be realists. A certain support is required for the effort of work collectives to produce really new products, that is, products that meet the highest requirements as to performance and technical characteristics. Why not give enterprises the right to "veto" the production of "innovations" imposed

on them if their characteristics do not meet the best world models? It would seem necessary to make provision for this right in the Law on the Socialist Enterprise, whose draft has now been put up for nationwide discussion.

### 3. How Do You Catch Microns?

The year before last they did a job evaluation at the Sumy "Nasosenergomash" Association. Triumphant reports were sent off to the appropriate authorities about things being put entirely to rights at the enterprise. But the representatives of state acceptance noticed from the very first that...barely 80 percent of metal-cutting equipment can provide the accuracy in the machining of workpieces which is required by the GOST's! We should note that the "age" of those requirements is rather advanced--they are 20 years old.

What if tomorrow the designers give the workers in Sumy an up-to-date model of a pump? It would be impossible to put it into production with the equipment they have. Why? In engineering, and every engineer knows this, there is a clearly defined trend toward superaccuracy in the linear dimensions of parts, ultrapurity in the composition of materials, and so on. It is only in the super and ultra ranges that designers today are able to create an up-to-date product that meets the higher requirements with respect to reliability, durability, productivity, accompanied by sufficiently low specific values for labor inputs and materials and energy intensiveness.

Once again an elementary logic: achieving the required accuracy and consequently the quality of the product requires the appropriate equipment and monitoring and measuring technology and apparatus. The survey showed that at most enterprises the technical facilities fall far short of meeting the requirements with respect to the quality of the product produced. The question of capturing the microns is thus becoming more than relevant.

In this connection there is good reason for ministries and departments under the sponsorship of the State Committee for Science and Technology to adopt a technical passport system for their subordinate enterprises. This should cover not only the machine tools, but also the processes themselves. To get a realistic picture of what they ultimately possess here and now. And future plans for development of branches and for enterprise reconstruction would be adjusted on the basis of the principle: the product produced must meet the indicators of the future world level.

But this process cannot take place overnight. It will take more than a year to retool industry. But high-quality products have to be manufactured this very day. Where is the way out? It can be seen by applying the maximum load on the equipment, processing lines and flexible automated production operations that meet the high requirements. There is that kind of equipment at every enterprise. But making full use of it is possible only by organizing a three-shift operating schedule after the model of the Kharkov enterprises. This represents an important potential for improving quality and efficiency.

#### 4. The Consumer Makes the Evaluation

To start with--two figures. Our country makes about 160 million tons of steel a year, 35-40 million tons more than the United States. And yet it produces barely two-thirds the volume of metal products of all types--machines, structural fabrications, and so on. What is the explanation? The specialists are unambiguous: the low performance characteristics of our metal products. Note that they do not simply say quality, but performance characteristics.

Once again the conclusion is suggested on the basis of an analysis of the responses to the questions in our survey: these terms do not coincide by any means. For instance, the Odessa Machine Tool Building Association is far from last place in Minstankoprom with respect to the quality of its products. However, its products do not always satisfy consumers. The same association we referred to, "Kharkovtraktorozapchast," has for that reason been compelled to develop its own facility for making machine tools!

"By 1990," says the association's general director N. Kutsin in responding to the questions of our survey, "we plan to increase its capacity fivefold. Not, of course, because things are what they should be."

We should note that our enterprises which have been pursuing such principles could ultimately become like self-sufficient economic entities of this kind, like subsistence farms. After all, however you try, your own machines will always have that primitive smell. It is clear that the tractor builders have neither the scientific facilities nor the personnel that Minstankoprom has. But why is this process occurring at all?

"Largely," says V. Yakovlev, chief of the Donetsk Interoblast Center for Metrology and the Setting of Standards, "because the economic interests of enterprises do not always coincide with the economic interests of society. Here it would seem that there should be a change in the criteria used to evaluate the activity of work collectives. The performance characteristics of products must be the basic thing. The greater the economic benefit from using a product in the economy, the better the economic condition of the manufacturer should be.

Let us also add this paradox: Today the GOST's on products being produced are not drafted by the product's consumer, but by the person who is producing it. Which accounts for the difference between the official quality indicators and the performance characteristics. That is why a substantial portion of products, although they meet the parameters set down in the design documentation and the state acceptance cannot file complaints against them, are nevertheless not to the liking of consumers.

It would seem that USSR Gosstandart needs to reorient the very process of the drafting and approval of GOST's toward satisfying the demands of the product's consumer. This especially applies to new products.



## 5. Ruble Pressure on Those Who Make Rejects

Actually the fifth problem which state acceptance has pointed up is a trivial one: How to improve interaction between related producers? But the survey shed light on it from a new and one might say somewhat unexpected angle. It is a question of inspecting components when they arrive.

Until recently it was assumed a priori that strict inspection of incoming components guaranteed quality of the finished product. It had to be organized and it was organized. Enterprises invested resources in this effort on a considerable scale. But the responses to the survey are convincing: even when inspection of incoming supplies is ideal, it is not yielding the benefit it should. And it all lies in the fact that the enterprise manufacturing the end product, given the present financial and economic relations with its suppliers, loses far more than the producer of substandard goods when a lot of components is rejected by inspection when they arrive! The reason is that the penalty for the components is one-tenth or one-hundredth of the value of the end product that was not produced because they were not available.

The way out of this situation suggests itself. Acceptance of arriving supplies is unquestionably necessary. But it should not be a substitute or replacement for inspection of the component before shipment. That is the first thing. And second, when the products of supplier enterprises are rejected, they must bear full economic and moral accountability equal to that of assembly enterprises. Not get by with penalties that are like gnat bites--state acceptance authorities must have the right to eliminate from the plans of suppliers producing substandard products amounts commensurable to the value of the end product that was not manufactured through their fault.

This is undoubtedly a complicated question. There is something here for planning and financial authorities to think about. But we obviously cannot do without using the ruble for strict and, I emphasize, fair punishment of those who do poor work. After all, it is not for nothing that they say the gold ducket is small but expensive. Let the expensiveness of small parts be felt not only by those who use them, but also by those who produce them.

### Incentives Misdirected

Moscow EKONOMICHESKAYA GAZETA in Russian No 12, Mar 87 p 13

[Article by V.N. Arkhangelskiy, doctor of economic sciences, professor in the Academy of the National Economy of the USSR Council of Ministers: "'Better' Does Not Necessarily Mean 'More Expensive'"; first two paragraphs are EKONOMICHESKAYA GAZETA introduction]

[Text] Since the introduction of state product acceptance the workers of production associations and enterprises have begun to pay considerably more attention to the quality characteristics of their products. Still it is not uncommon for large lots of products to be returned to the shops for additional work, which has an adverse effect on fulfillment of plans for product deliveries and results in sizable additional costs.



V.N. Arkhangel'skiy, doctor of economic sciences and professor at the Academy of the National Economy of the USSR Council of Ministers, reflects on these and other economic problems related to raising the technical level and performance characteristics of products.

### "Saving" on Technology

Quite often we have occasion to hear that improvement of product quality necessarily increases the product's production cost.

In a number of cases the rise in the technical level of products does actually require additional costs. But usually the complaints are made because there has to be increased expenditure of labor and physical resources to achieve the quality of a series-produced product--more accurately, to bring it into conformity with the standards and technical specifications that are in effect. Thus it is not a question of meeting some sort of extraordinary requirements, but of adhering to the elementary rule: produce the product properly, without defects and rejects.

Why has this problem arisen? Apparently because for a number of years it has become a deep-seated habit to "save" on quality, to sacrifice it whenever an effort was made to perform the tasks facing production with the smallest expenditure of energy.

For instance, the desire to speed up and "simplify" the manufacturing of a product is often pursued by reducing the processing cycle, and that means a deterioration in the quality of the product. Departures from the technology are manifested in the omission of some of the operations, changes in their sequence, and other violations of technological discipline. In all cases there is one result--lower quality and rejects.

For example, at a majority of machinebuilding and instrument-making plants inspection between phases has been done away with. It was assumed that quality in the manufacturing of parts and assemblies would be guaranteed by inspection at work stations and by making workers more responsible.

But this has not happened. Then in order to correct the defects that occurred additional and unwarranted operations were incorporated into the manufacturing process: things like preparation for assembly, machining by fitters, and so on. The reduction of monitoring operations and the increase in the length of the basic operations that resulted from that have not made products cheaper, but more expensive.

It is clear that in this case the rise in the production cost is occurring exclusively because of the inability to organize things and references to the "difficulties" related to maintaining the necessary level of quality cannot be taken seriously.

Here is a quite typical example of how problems within the production operation are "solved" by lowering quality, and when the time comes to bring the level of the product produced into conformity with the technical

specifications in effect, then they begin to complain about the higher costs and the drop in the enterprise's income.

For example, because of flagrant violations of the technology the Frunze Automotive Assembly Plant produced 1,069 dump trucks which did not meet technical specifications; this amounted to about 3.5 million rubles. The State Arbitration Commission issued a decision confiscating the profit obtained from selling the substandard products.

An inspection by Gosstandart also established that more than 8,000 "Sadko 733-D" color television sets did not meet the standards of the technical documentation because of the low quality of assembly and installation. The State Arbitration Commission eliminated from the sales plan about 4 million rubles and confiscated about 80,000 rubles of profit obtained from selling the substandard product as a revenue of the budget.

It is clear that to eliminate the causes of rejects we have to get back to the correct technological regime. But in the context of the "truncated" technology that has come about at the enterprise, this approach increases costs. Thus the normal technology envisaged by the documentation is perceived as something unusual and destructive as compared to the familiar technology that has been "made easy" at the expense of quality.

#### Who Pays for Repairs Under Warranty?

Producing a low-quality product, as we were able to see, often helps the producer to fit more easily into the limits of the planned production cost and even to reduce it without resorting to such painstaking efforts as retooling, improvement of the organization of production and the organization of work, and tighter inspection. But "saving" on quality is a fictional quantity; it necessarily means losses in the economy. Who is supposed to pay for manufacturing a product that contains defects? Who? It would seem that there can only be one answer: of course, those who produce such a product. But we will not be hasty in drawing a conclusion. After all, if producers had to pay for the losses which the consumers who have received substandard products incur, then we would hardly have occasion to hear talk about the "unprofitable nature" of improving the sound quality of products.

Under present regulations defects detected during use are corrected free of charge during the warranty period. Which means that the manufacturer has a direct motivation to shut off all channels of rejects and to ship high-quality products so that he will have no costs for making repairs during the warranty period? Nothing of the kind. Although formally the economic relations between the manufacturer and the consumer of the product guarantee the latter "free" correction of defects that have been found, actually it is the consumer who pays for repairs under warranty. The cost of repairs under warranty are included in the price of the product on the basis of an average statistical estimate. For instance, correcting defects in color television sets costs about 13 percent of their total cost. This kind of situation hardly instills in the enterprise economic incentives for improving the quality of the product. It also means that the price of a television set is 13 percent

higher because of its low quality. A paradox comes about: The lower the quality of the product, the higher its price.

The interests of consumers also need to be appreciated more in establishing the service life of the product covered by the warranty. The system that has been adopted assumes that the product which has been obtained goes into use immediately. One can imagine, though with some difficulty, that women will wear sandals they have bought in the wintertime without taking them off during the warranty period. But what is the case with industrial equipment? The time required for its installation and preparation for operation, especially in connection with major projects related to retooling and reconstruction, and also when new projects are built, often extends beyond the warranty period, which expires before the equipment goes into operation. Wouldn't it be more sensible to start the warranty period not when the equipment is acquired or delivered, but when it is put into operation?

It is also unfair to include losses from rejects in the production cost and ultimately in the product's price.

It would seem fair that when repairs have to be made during the warranty period the cost, the additional shipping expenses, and so on, should be charged to the guilty party and paid for out of the profit transferred to the material incentive fund and the fund for social welfare and cultural measures. This would make enterprises more accountable for the quality of the products they produce.

When prices are set on products, care should be taken to take the interests of consumers into account.

For instance, a new product being produced to replace an old one must guarantee the consumer a real economic benefit with respect to performance characteristics and price. For example, one of the products of the Kharkov Machine Tool Building Plant imeni Kosior can hardly be seen as a high-quality product from this standpoint. Instead of an automatic production line for grinding with a productivity of 38 parts per hour, the plant undertook to manufacture the model with an output of 8-10 parts. The cost of the new model was about 317,000 rubles, whereas the previous model cost 225,000. Consequently, the present system of pricing does not offer sufficient motivation for improving product quality. Nor does the system of economic incentives provide an orientation in this direction. It operates more on the side of an incentive rather than on the side of penalties for the low quality of a product produced.

The Main Thing Is Not the Process of Putting a New Product Into Production, but the Result of That Process

The relationship between production cost and quality, or, more accurately, between production cost and the technical level of the product, is also advanced quite often as the reason why additional costs occur in putting new and improved products into production. As a matter of fact, the transition to manufacturing a high-quality new product does as a rule involve a higher production cost of products and their prices. But people "forget" in this

connection that the higher production cost and price must unfailingly be accompanied by an increase in the performance characteristics of the product so that the cost per unit of useful benefit is substantially reduced from the standpoint of the consumer. Moreover, production costs do not remain constant even for the producers of the new product themselves if at the same time they are concerned about product quality they also try to improve the technology and develop the technical basis of their production operation.

Much also depends on the orientation of the economic mechanism toward stimulating the production of a new product that meets the world level. As a rule the transition to its industrial manufacture does not always go smoothly because of the complexity of the process of organizing production itself and because the economic incentives for this process are insufficient. Under the new economic conditions a situation is being brought about which promotes faster organization of a new product. For instance, the costs of putting a new product into production are taken into account in the volume of sales in determining the size of economic incentive funds, and supplements for quality comprise a sizable portion of those funds.

Still the problem of guaranteeing the economic motivation of enterprises in the transition to a new and high-quality product has not yet been fully solved. The conditions for compensation of reduction of economic incentive funds under the new conditions provide an orientation toward the process of putting a new product into production, not toward the end result. The higher the costs of putting the new product into production and the longer it takes, the better it is for the enterprise, since the higher costs during that period are being reimbursed. But it is more advantageous for the economy to speed up the transition to the new product. Consequently, the system of material incentives needs to be turned toward the end result of updating a product; when lower sales are being compensated, greater consideration needs to be given to the benefit in the economy from the production and use of new technology (product), whose application has been completed in the year in question.

#### State Acceptance Official Interviewed

Moscow CHELOVEK I ZAKON in Russian No 3, Mar 87 pp 19-24

[Interview with Boris Sergeyevich Migachev, chief of the Main Administration for State Product Acceptance of Gosstandart, by V. Strelkov: "The Quality Commissioners"; date and place not given]

[Text] As of 1 January of this year state product acceptance has been instituted at 1,500 of our country's enterprises. The purpose of this innovation is to set up a strong barrier against rejects, to achieve a sharp rise in the quality of products produced, to bring them up to the level of the best world standards. The thousands of the best specialists of plants and factories who have been assigned to state acceptance--officers for extradepartmental inspection of quality--can rightly be called quality commissioners. The USSR State Committee for Standards heads this important and responsible effort.

Our correspondent V. Strelkov addressed a number of questions to B.S. Migachev, chief of the Main Administration for State Product Acceptance of Gosstandart.

[Question] As everyone knows, Boris Sergeyevich, from the very first days that state acceptance was in operation disturbing reports began to come in to the effect that entire lots of products were being rejected at many enterprises though previously they had gone through the OTK without obstacle. Even certain products which had been awarded the state Quality Emblem are being rejected. This could all have an impact on the economic condition of the collective. What was the reason for such harsh measures?

[Answer] The main reason was that production people began to be called upon to comply fully with what they are supposed to do. As you remember, the decree of the CPSU Central Committee and USSR Council of Ministers entitled "On Measures To Radically Improve Product Quality" was adopted in 1986. It defined a broad set of interrelated economic, technical, social, and legal measures. Their performance will sharply increase the competitiveness of the domestic product and the prestige of the Soviet trademark. Quality has become one of the most important driving forces behind acceleration of economic development. The necessary level of product quality has not been achieved--this will inevitably affect earnings. If they produce products that meet the requirements of standards and technical specifications, workers will receive all of their earnings.

Let us imagine this situation. You get up in the morning and you cannot shave because the plug of the electric razor does not fit into the wall outlet. You go to work in an unironed shirt: the iron overheated because of the excessively high and nonstandard voltage of the power supply. You were unable to wash because a stream of cloudy water gushed out of the faucet. One of your shoes turned out to be larger than the size specified by the standard, while the other one was smaller. You could not drive your car because of the strong knock: the gasoline is unsuitable and below grade.

An exaggerated picture, right? Not at all. It is simply that in all these cases you have encountered violations of standards, manifest rejects. And is it so uncommon for workers to use a sledgehammer in assembling machine tools and machines so that certain parts will "fit"? And all because the manufacturer made a mistake by a fraction of a millimeter. You surely have more than once been resentful about a light bulb which burned only an hour or 2 after you bought it. Or a new television set which has become a rare guest in your home because of the constant repairs being done in the television repair shop. Cases of that kind could be enumerated without end. One thing is essential: They are all the result of a violation of the requirements of standards.

It is not by accident that the standard is referred to as the law of industry. These normative and technical documents have incorporated a set of standards, rules, and requirements which apply, say, to products, patterns, and samples of substances. For example, state standards (GOST's) mainly set standards, parameters, dimensions, requirements, rules, indicators of technical level and



product quality, terms, designations, and other things used in more than one sector. All of this is necessary to guarantee the optimum quality of the product and unity and interrelationship between the different fields of science, engineering, production, and culture. GOST's also set requirements for products produced in volume or large production runs for broad intersector use. For example, uniform types and sizes of clothing and footwear have been established for the entire country. And when you go into a clothing store, you go confidently to the rack with suits of your size. A light bulb made in Syzran must fit into the socket of a lamp made in another city. And the bearing made by the Moscow State Bearing Plant must fit in the part of a machine manufactured thousands of kilometers from the capital.

We need to add to this that a standard is drafted on the basis of advances of science and technology, advanced know-how, and it makes provision for solutions that are optimum for society. The relevant ministries, departments, scientific research institutes, enterprises, and organizations take part in drafting it, and advanced know-how abroad is taken into account. Standards are binding within the limits of the sphere of validity, area, and conditions established for them. Violation of the requirements of a standard is not permitted.

I would recall that Article 152 of the RSFSR Criminal Code (and similar articles in the criminal codes of the other union republics) provides that if an enterprise repeatedly or on a large scale manufactures a substandard product, one that does not meet standards or technical specifications or is incomplete, the director, chief engineer, or chief of the technical inspection department, and also persons who occupy other positions who have been performing the duties of these persons, are subject to a penalty of imprisonment for a term not to exceed 3 years or to do corrective work for a period not to exceed 2 years, or a fine not to exceed 300 rubles, or dismissal from their position.

But this measure is invoked with extreme rarity. In most cases those who are to blame for manufacturing poor-quality and substandard products are given a "little scare." The fines for delivery of such products are not always reflected in the wages of the manufacturers.

Deficiencies, negligent machining of parts, the use of low-grade materials instead of the quality materials called for in the standard, and many other things have become reasons for the manufacturing of substandard products. There have been quite a few enterprises where design and processing documentation have been handled extremely unsatisfactorily, and outdated standards and technical specifications have been applied. After all, like any other law, a standard is constantly improved in keeping with present-day requirements. And this has to be worked on constantly. But plant technical inspection services have by no means always seen that the product was produced strictly according to the standards, they have been captured by production. As a result it has quite often been the case that entire brigades have gone from manufacturing enterprises to the customer in order to "finish" the product on the spot and to adjust entire lots of a product that have been delivered. It is not surprising, for instance, that customers for a

television set look at the technical card for the manufacturing date and prefer to take one made at the beginning and middle of the month, not at the end, when at the plant they are engaged in a crash effort to fit every product, good or bad, into the figures for fulfillment of the plan.

We can no longer put up with this. In his speech at the conference in the headquarters of the CPSU Central Committee on acceleration of scientific-technical progress on 11 June 1985 M.S. Gorbachev, general secretary of the CPSU Central Committee, emphasized that quality and the technical-and-economic and esthetic level of products represent one of the most vulnerable points of our economy, the source of many difficulties and problems. And all of this is causing us serious socioeconomic and moral and political harm. "Product quality," he said, "must be an object not only of professional, but also national pride." Comrade Gorbachev noted that Gosstandart, whose direct responsibility it is to set up a reliable barrier against the manufacturing of substandard products, has a special role to play in the fight to raise product quality.

State acceptance does not depend on the enterprise, ministry, or department. It is subordinate only to Gosstandart. The head of the state acceptance agency at every enterprise has his own round stamp, and in his subdivision he has the right to hire and fire. It is the task of state acceptance not only to set up a barrier to rejects, but also to help the work collective to find the weak points in production, to do everything possible to prevent rejects from occurring. That is why the best-qualified specialists are being assigned to the state acceptance agencies.

State acceptance has not fallen from the sky. It was preceded by an experiment that lasted 1.5 years, that helped to reveal a large number of hidden deficiencies. Who would have supposed that representatives of state acceptance at "Sibtekstilmash" in Novosibirsk would from the very first reject almost all the parts used to assemble looms which have been awarded the state Quality Emblem? Nor were matters any better at the Moscow "Elektrosvet" Plant imeni P.N. Yablochkov, whose products had also been awarded the state Quality Emblem: There the normative-and-technical documentation proved to be far from the requirements of the standard.

In short, the experiment showed that extensive preparations had to be made for state acceptance at every enterprise. Putting order into technology, normative-and-technical documentation, measuring and testing equipment, and the plant OTK's. A radical restructuring is also indispensable in the consciousness of workers and engineering and technical personnel so that each feels himself responsible for producing a quality product. So as to activate the most powerful factor--the human factor. So that everyone finally understands that he has to do his job honestly, to produce a product as good as required by the law of industry--the standard. In short, it is a question of working conscientiously, of making a real effort. Without carelessness and shoddiness.

[Question] As is evident, state acceptance is inseparately bound up with a number of other measures being carried out in the industrial sector. For example, with job evaluation, which we wrote about in the second issue of our journal for this year.

[Answer] Of course, that is where quality begins, at the work station. Whether it is a lathe, an electronic control panel, a construction site, the bench of a patternmaker--all of this must meet the requirements of highly sophisticated production, must be furnished with up-to-date tools and equipment, and must be kept in complete order. How can we talk about quality when a product is manufactured at a dirty work station that is not cleaned up? What if a measuring instrument is not taken care of, and an old or neglected machine tool does not allow for obtaining the required accuracy, sometimes in microns? How can we talk about quality if at times a worker doesn't measure the part with anything! Even in such a particularly precise production operation as the manufacturing of parts, instruments, and apparatus in the electronics industry, by no means all the work stations have been equipped with precise measuring instruments. Take, for example, the Voronezh Electrovacuum Instrument Plant. It is a surprising thing, but even last December it had only one instrument that is extremely indispensable in measuring the brightness and coordinates of chromaticity! Yet the plant needs those instruments as a man needs air to breathe. Unless the work stations of inspectors have a sufficient supply of them, they cannot check the quality of picture tubes and consequently television sets with high accuracy.

The work station must be a true panel for controlling an up-to-date machine. And not only a machine. For example, this is how I imagine a work station of a fitter. It also resembles a control panel. There are numerous tools hanging on the walls in ideal order. Strictly by size and designation: miscellaneous wrenches, saws, needle files, chisels. Measuring instruments are in their cases--protected against random dust. Without leaving his station, without looking, the fitter takes up what he needs. The entire tool is chromium- or nickel-plated. Even a little drop of random dirt immediately catches one's eye. Probably there is no need to go far with examples. In our country there are enterprises where the work stations are kept in ideal order. Everything depends on the attitude one has toward his own job. It turns out that we have everything that we need to equip work stations still better. But for some reason the tools in most shops are sometimes kept in a pile in boxes under lock and key. They are made of black metal, oil-coated, with metal filings sticking to them. How can we talk about production sophistication, about high product quality, when it is unpleasant simply to take such a tool in your hand?

As you see, the job evaluation, the effort to bring work stations into conformity with present-day requirements of production--this is also one of the parts of state acceptance binding together all the problems of quality.

[Question] One of the components.... But after all, quality does not depend only on the final production operation. An immense role is played by supplies and raw materials. It is clear that incoming inspection at the enterprise could reliably prevent delivery of substandard materials. But this will



create certain difficulties in supply, in the enterprise's uninterrupted operation. Suppose low-grade steel had to be delivered instead of the high-grade steel out of an extreme necessity? As a consequence the part made from it quickly breaks down.

[Answer] In short, you mean what happens as in the rhyme when the battle was lost because of the poor work of a blacksmith, since the general's horse went lame? Of course, this interrelationship has been shrewdly noted. And a definite effort is made in order to prevent something like that happening in industry. For example, the introduction of comprehensive setting of standards has been going on for many years now. It is aimed at planned improvement of product quality in all the stages of its creation. Not one standard, but an entire interrelated set of standards is approved at the same time: on the raw materials, the supplies, the intermediate products, the technical requisites, and the equipment used in manufacturing the product, and the finished product. The number of such interrelated standards runs between 10 and 100 on each product. Ultimately an entire chain is formed of standards that check one another from the beginning to the finished product.

As you see, the comprehensive setting of standards solves the problem of quality not "brick by brick," but rather it builds the entire "house" at once. That is why it is one of the most crucial factors capable of raising the level of the quality of production of practically all products.

But at present by no means every product can be embraced by this method and become part of the system of comprehensive setting of standards. At the same time most enterprises in industry are bound by the invisible threads of cooperation to dozens and indeed even hundreds of related producers. Take a present-day passenger airplane. It consists of tens of thousands of parts. Metallurgical, chemical, instrument-making, and many other plants take part in building it. Hundreds of related enterprises supply parts even to motor vehicle-building enterprises like VAZ, KamAZ, and ZIL. The new system of state product acceptance makes it possible to exert pressure quickly on suppliers of raw materials, supplies, and components if the delivery is below standard. For example, assume that the incoming inspection finds that materials which do not meet the standards are being delivered. The state acceptance representative immediately reports this to the state acceptance official at the supplier plant, and the latter takes the necessary steps. If state acceptance does not exist at that plant, then the report is sent to the respective regional body of Gosstandart. A single chain of constant inspection of practically all enterprises is thereby created through the work of this entire system.

[Question] In that case, Boris Sergeyevich, economic contracts for material and technical supply must become considerably more important? After all, without state acceptance the management of the enterprise would be forced to make concessions to suppliers out of a fear of spoiling relations with them when material arrives that contains departures from standards. Now all below-standard supplies, raw materials, and components are being rejected without compromise in the inspection of deliveries.

[Answer] Quite right. State acceptance is bound up "like iron" with economic contracts by means of which cost-accounting enterprises and organizations acquire and sell through material and technical supply and sales raw materials, supplies, equipment, and the instruments and subjects of labor necessary to fulfill production plans. And aside from designations, quantity, assortment, and delivery dates of products, there are also many other things, they contain specifications defining quality, completeness, and the grade of products, with references to specific code numbers of GOST's, technical specifications, or samples and specimens.

In particular, the role of economic contracts is increasing at those enterprises which are on self-financing. You know, after all, that beginning this year five industrial ministries have made the conversion to these fundamentally new economic conditions. In the method of self-financing the enterprise must earn not only enough for current needs, but even for its own development: its production development, technical development, and social development. And all of this is done out of profit, which has become the principal criterion of the work collective's performance. I will not dwell on that in detail, it is a separate and independent topic. But it is under those conditions, I repeat, that the importance of economic contracts increases. This will be especially evident with the conversion to full cost accounting not only of suppliers, but also of components of Gosstab, which are crucial to the pace of production, product sales, and profit of the enterprises that have made the conversion to the new economic conditions. And along with all this, as you see, there is a growing importance of legal work in the economy and a greater role for the legal staff in the activity of industrial enterprises.

[Question] And the last question concerns the OTK. How will these departments interact with state acceptance? After all, at certain points their functions coincide....

[Answer] Technical inspection departments are part of the system of the technological process of production as a whole, of the process of the product's step-by-step manufacturing. State acceptance is called upon to help set up the entire production operation as a whole, helping work collectives to detect and eliminate weak points, "painful spots," the sources of substandard products. And one of its most important tasks is to help the OTK in furnishing all the necessary inspection equipment, up-to-date measuring instruments, and appropriate equipment. After all, only under those conditions is it possible to provide the strictest inspection for quality. And things have to be set to rights in this regard.

At the same time OTK's are being given a considerably greater role, and their activity is being restructured. For instance, the chief of the OTK is being given the powers of a deputy general director of the association or deputy director of the enterprise for quality. The technical inspection staff is now financially dependent not on the basic results of economic activity, but on quality indicators.

In short, state acceptance and the OTK represent a kind of "tandem," which unifies and multiplies the efforts of these two departments in the effort to achieve high product quality, to radically restructure the activity of enterprises, and to supply them with equipment that meets present-day requirements.

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## SELECTED MATERIAL ON STATE ACCEPTANCE OF PRODUCTION

## In Vilnius Production Association

Vilnius SOVETSKAYA LITVA in Russian 8 Mar 87 p 1

[Article by S. Magnus, under the rubric "State Acceptance: Practice, Experience and Problems": "With No Defective-Product Claims: Vilnius Silicate Products Production Association Has Been Working That Way"; text enclosed in slantlines is in boldface in original]

[Text] Neither in January nor February did state acceptance have any effect on the rates of production of output or on workers' earnings. Against the background of this fact, one can understand the temptation of the employees of a neighboring enterprise to attribute the silicate workers' success to the fact that state acceptance at their plant was introduced back before the new year, in October. And therefore, the explanation goes, they had time to reorient themselves by January and adapt to the higher standards and get into a new rhythm.

Only Yonas Burneyka, director of state acceptance in the association-- incidentally, since 1972 he has headed one of the enterprise's basic shops-- categorically disagrees with that assertion.

"For 20 years now the enterprise has worked without a single defective-product claim filed against its products," he says. "This has been possible thanks to a creative attitude toward their jobs on the part of everyone who works here-- workers, technologists, designers. Otherwise, we simply would not have been able to work."

Burneyka, unquestionably, is right. Otherwise, the association would have been unable, in the most literal sense, to work, because practically all the equipment that makes up the production lines for the manufacture of bricks and mineral wool had long since become obsolete. For example, the mineral-wool production line, with the exception of the cupola furnace, was built back in 1958 and was nearly 30 years old. Of course, this doesn't count all the technological "stuffing" with which the silicate plant workers subsequently filled it. Practically all operations on the line are now performed with the help of mechanisms. He pushed the appropriate buttons on the control board, and output started moving, from the melting process itself up to and including

packaging in neat reams with the help of mechanisms. The metering devices, conveyors and packers are the results of the work of the enterprise's own inventors and efficiency experts. Until the introduction of their ideas, that same mineral wool was taken off the receiver and laid out with ordinary forks of the sort a peasant would use in his livestock yard to deal with manure. You can realize the difference in comparison to what used to exist if you consider that even Swedish and American silicate plant personnel, those same manufacturers of prestigious foreign goods, who visited the association at various times noted the high level of mechanization and the cleanness of the production facilities of their Vilnius colleagues. And certain ideas from the branch's special design institute have proved useful even to the visitors.

That's what the engineering "stuffing" means.

But if everything in the silicate workers' production line has been worked out so well, and all the stages in the production process so tightly and precisely interfaced with one another, can it be that there are no problems here, and that the new state acceptance service was irrelevant altogether?

"There are plenty of problems," said Burneyka in response to this supposition. "There are so many of them that we have combined them in special documents. One of them includes seven "large-size" problems that we cannot solve without the help of the USSR Ministry of the Construction Materials Industry; the second consists of 21 points, many of which we can carry out on our own and with the help of the republic Ministry of the Building Materials Industry, under whose administration the association operates.

And so that's how our interview with Yonas Burneyka, director of the state acceptance service at the Silicate Products Production Association, went. I asked him about the quality of output--the silicate bricks and the mineral-wool mats, and he talked about the problems of supply and spare parts, and about direct ties with the plants that manufacture these spare parts in, say, Kuybyshev.

This is because the state acceptance service there considers these questions /precisely its own/ questions, the main ones in its work. It considers its duty to be not simply to mechanically control the quality of the finished products at the end of the production line with measuring instrument in hand, but to be a service /that ensures/, to the extent of its ability, the high quality of these products. And that is impossible to do without intervention in the very essence of the process of the manufacture of products, without a step-by-step control along the entire path to the finished product.

Such an approach requires considerable manpower. And it is plainly inadequate if they were to rely only on the staff of 10 people that Yonas Burneyka has, even given their high qualifications. So they need helpers, they need support. In the person of those same workers, foremen and the shop engineering service--after all, it is in their interest to guarantee the high quality of the end product.

And that is how quality groups arose in the shops, first of all in the main ones. They include shop technologists, mechanics and the most experienced and

skilled workers. And they solve the most essential, everyday problems of production--without noise, without official procedures, and without formal minutes--but effectively. Sometimes they are even solved over a cup of coffee.

Such a group from the mineral-wool shop recently met. The worker Romas Kacinskas said: too many lumps are still getting into the mineral wool. Even though we are not deviating from state standards, if we get rid of them the mats will start looking much better and will be of better quality. Gradually, the technologist Ruta Burdaitene had her say, as did Ivan Podleshchuk, a mechanic. Then Yonas Burneyka, who happened to drop by, expressed a few thoughts. An informal council of interested people and an informal decision that was tested almost immediately: they took a piece of sheeting off the conveyor. They obtained the calculated size of gap, in which pieces of unmelted raw mineral started to disappear. And all of this in a short time! And as a result, the mats became lighter, and the danger of their spontaneous combustion in the finished-product warehouse was significantly reduced.

It would be useless to look for the minutes of the group meeting that has been related. An informal council and an informal decision--everyday, ordinary work. A case that no one might have even remembered a week later, if I hadn't recorded it.

Maybe Yonas Burneyka is right. Can it be that the chief meaning of the new service and the pledge of its high effectiveness lie in just such quiet, everyday work?

Our information: the Vilnius Silicate Products Production Association, overfulfilling its January and February plans for production and sales, produced 43,000 rubles' worth of output above plan. There were no defective-product claims.

#### At Tashkent Plant

Moscow EKONOMICHESKAYA GAZETA in Russian No 11, Mar 87 p 15

[Article by journalist S. Dubinskaya, under the rubric "State Acceptance: Quality, Rhythm, Discipline": "Workers Erect Barrier to Defective Products"; first paragraph is source introduction]

[Text] In the first automated sector of the Tashkent Farm Machinery Plant, which produces cotton harvesters, the workers refused to make bushings on a machine tool that, because of poor adjustment, could not ensure the necessary precision of machining.

State acceptance personnel were already working at the plant; there were already plenty of annoyances, and now this. People tried to make the workers see reason; the technologists promised to set everything straight "as soon as possible," and the shop managers grew nervous--the shift was drawing to a close, and the assignment was in danger of not being fulfilled. "And you won't earn anything!" someone told them.

"No matter," replied the sector foreman I. Khalyknazarov coolly. "We don't want to receive money for defective products."

Such a seemingly small episode, but it says a lot! The campaign for high quality and the honor of the plant trademark is being joined by the main force--the workers. Not in words and not in reports, but in deeds. Workers' control is being born--all-embracing, genuinely state control, and therefore effective control. According to the testimony of plant controllers, at the Tashkent Farm Machinery Plant the quality of output in Shop No. 2, which includes the automated sector, doesn't even compare to what it was about two months ago.

What a profound and true statement was made at the CPSU Central Committee's January Plenum about levers that make it possible to include the decisive force, the people, in restructuring. "If we do not do this," said M. S. Gorbachev in his concluding remarks, "we will not accomplish the tasks of acceleration and will not bring about restructuring; it simply will not be."

An emergency of so-called local scale occurred at the Ternopol Combine Plant. Boris Ivanovich Fedchishin, an electric welder in the consumer-goods shop, demanded that the managers of the blank-pressing shop cease the production of defective output. The situation was this: Fedchishin had come to work and waited a long time for blanks for Moskvich car mufflers, which the blank-pressing shop supplies. Two boxes of blanks were brought in, considerably late. When Fedchishin welded several parts and started to check them, it turned out that they were defective, with cracks in the covers. And it wasn't just a few of them--out of 500 pieces, every other cover had a defect.

The worker took several covers and went to I. Arshavskiy, chief of the supplier shop: Look what defective stuff you're putting out! And in reply he heard the mocking comment: "Why'd you run over?" And S. Tendyuk, the deputy shop chief, wouldn't look into the matter either, although he, most of all, was to blame for the fact that the press operators were flagrantly violating technological procedures for making the covers.

And what did Fedchishin do? Take offense and give up? No, the worker didn't retreat. The Ternopol Combine Plant's in-house newspaper reported what had happened, and the plant management intervened. And here's the result: steps were taken to eliminate the loopholes that the defective output was getting through. No less important is the fact that the circumstances through which the conflict arose, made public, not only forced the direct participants to revise their stand but stirred everyone to think about his own attitude toward his work.

But the key is that they were made public. Otherwise, everything that had happened might have been written off, say, to the poor character of the electric welder Fedchishin. But defective work, when presented for everyone to see, remains defective work, no matter what words it is couched in. The main thing is that people started talking openly about shoddy work and thereby erected a roadblock on its path.



The first one to speak up loudly and call shoddy work by its proper name was a person who stands at the sources of high product quality--a worker. So the workers have gotten sick of working according to the principle, "maybe it'll get by," and they themselves want to take an active part in establishing order in production.

I recall an incident that happened not so long ago. When it became known last summer that the Cheboksary Industrial Tractor Plant had been put on the list of enterprises whose output was subject to state acceptance, this aroused serious concern in the staff of the Ministry of Farm Machinery. The Cheboksarets tractor had accumulated such a large number of negative comments that it had become something of an odious machine. People started to say it would never make the grade and that it was time to take the T-330 out of production.

When the rumor of such plans traveled from the capital of Chuvashiya to the Siberian city of Nazarovo, it aroused ardent protest among the group of machinery operators responsible for testing the T-330 tractor, which is headed by Anatoliy Vladimirovich Pastyrev. The group consists of six machinery operators who work three shifts at the Nazarovo Coal Strip Mine. They are also acquainted with famous imported tractors, but they work on two T-330s and they don't want any other machine.

What did the Nazarovo tractor operators do to save their favorite machine? They sent their brigade leader to Cheboksary (using their own money, incidentally) and themselves made up for the number of hours he was supposed to work. Upon arriving in Cheboksary, Pastyrev visited not only the plant but the obkom, where he set forth the brigade's views and refuted, one after another, the arguments against the T-330.

"It's a highly maneuverable, stable machine that is convenient to operate; it has a comfortable cabin with a good view and an air-cooled engine," he said persuasively. "And it's not inferior to the products of the foreign firms Caterpillar and Komatsu, if you eliminate the defects that, unfortunately, exist even in absolutely new machines."

The reason for the defects lies both in design imperfections and in flaws in technology. These defects can be fully eliminated, asserted the Cheboksarets's testers.

The machinery operators in A. Pastyrev's brigade presented their views on how to modernize certain of the tractor's assemblies in order to improve its quality. Two of the brigade's specific proposals were adopted. The annual economic effect from the introduction of one of them amounts to 10,000 rubles per machine.

The Cheboksary tractor builders have been making considerable effort to "cure" the T-330 of its ills. One of them is the poor quality of component assemblies and parts. Thus, one-fourth of the hydraulic assemblies--a product of the Melitopol Tractor Hydraulic Machinery Plant--are rejected by the incoming quality controller. A group of specialists from Cheboksary, which



included a representative of state acceptance, an engineer-designer, and the brigade leader from the tractor-assembly sector, visited Melitopol. They acquainted themselves in detail with the production process and met with workers, engineers and representatives of public organizations. They found out, for example, that the test stand for measuring leakage at the plant had not been perfected. So the Melitopol workers were shipping output that in their view was sound, but it was being rejected in Cheboksary by incoming quality control, which is equipped with up-to-date measuring devices.

At a meeting with the chief engineer of the Melitopol Tractor Hydraulic Machinery Plant, a joint decision was made on the steps that should be taken in order not to let the tractor builders down any longer.

Melitopol is not the only address visited by groups of specialists from Cheboksary. The Kamyshin Forge and Foundry, the Yelets Tractor Hydraulic Machinery Plant, the Radiator Plant in Buguruslan, the Volgograd Engine Plant and other enterprises that have been supplying poor-quality products for the Cheboksary tractor and depreciating its trade mark--those are the addresses of these raids.

And the Cheboksary people are establishing strict order in their own production process. Workers' control is erecting a barrier to defective output that passes from shop to shop. Following the introduction of state acceptance, a competition was launched in the mechanical assembly production on the basis of the "Workers' Relay" principle. 19 brigades have concluded cooperation contracts among themselves that obligate them to manufacture quality parts and supply them on schedule to their comrades. The routes of blanks and parts are being studied, and seven "quality groups" have been set up in the mechanical assembly shops.

The Cheboksary tractor builders are fighting, and not just in a pro forma fashion, and not just on paper, for the viability of their machine.

A. Pastyrev put the matter well: "To make the machine excellent, better than imported ones, we must work together. The engineer, the machine tool operator, the assembly worker and the tractor operator have the same responsibility."

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## FURTHER MATERIAL ON STATE ACCEPTANCE OF PRODUCTION

## Kokchetav Instrument Plant

Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 3 Apr 87 p 4

[Article by KAZAKHSTANSKAYA PRAVDA correspondent G. Maslov, Kokchetav: "Quality Testing"; first part of two-part article; first paragraph is source introduction]

[Text] On 6 January an accident occurred at the Kokchetav Instrument-building Plant. On that day, in shop No. 3, state acceptance representatives for the second day in a row rejected a consignment of 15-ton truck scales. Their acceptance was stopped pending the elimination of the defects that had been discovered and their causes. As is proper, a report on what had happened was submitted to USSR Minpribor [Ministry of Instrument Making, Automation Equipment, and Control Systems] and Gosstandart. However, the situation was incorrectly evaluated at the plant and no one reacted properly to it. What took the upper hand was the psychology of yesterday, when the behavior line was dictated and justified by the overall principle that applied to everyone "The plan at any cost!" But this time nothing came of it. Unlike the workers in the plant's OTK [technical control department], the workers in the nondepartmental control service had no intentions of retreating. The assembly of the scales was brought to a standstill for eight shifts, and that results in dissatisfaction among the shop workers. Some of them attempted to shift the responsibility for what had happened to the workers in the new state agency, accusing them of excessive fault-finding and strictness. But the crux of the matter lay elsewhere. The conflict that had arisen helped people to see more clearly the rather large breaches in the technical equipping of the plant, to which, incidentally, USSR Minpribor has closed its eyes for many years. The conflict also revealed a number of moral-ethical and social aspects of state acceptance, for the testing of which the instrument builders had also proven not to be prepared.

#### 1. Plenipotentiaries of progress

The instrument-building plant is rightfully considered to be the leader in the oblast's industry. Born in the same year as the October Socialist Revolution, it has grown up on the basis of a small, semihandicraft iron-foundry shop and during this time has become one of the most powerful enterprises in Sinegorye.

Its authority was created by the Stakhanovites of the first five-year plans, the front-line brigades of the fiery hard times, and the communist labor shock workers of the difficult postwar period. And in our time also, in the collective of many thousands of instrument-builders we have seen once again the birth of valuable undertakings which have subsequently become the property of all the participants in the oblast socialist competition. The plant's output is well known in a number of foreign countries. Incidentally, the plant's workers were the first to introduce the comprehensive system of output quality control, and the number of articles produced with the honorary pentagon is noticeably larger than at other plants in the oblast.

That is why the accident had attracted the attention of many, but acted on most of them like thunder in the midst of a clear sky, when one can hear the thunderclaps, but their source is invisible to the casual observer. However, the sky above the plant continued to appear clear and cloudless only for the uninitiated. Actually, the heavy storm clouds had begun thickening in the sky long ago. And if one is to be completely accurate, the first alarming thunderclaps had occurred not in January of this year, but several years ago. It was precisely at that time that the output produced by the shop that had recently been built proved suddenly to be needed by no one, and began to pile up unwanted at the finished-articles warehouse. The plant was "overstocked," and that threatened to disrupt the year's sales plan. And all this occurred because USSR Minpribor, together with the previous plant management, had not been concerned ahead of time concerning the contents of the "production-order portfolio." And then, at the necessary moment, it had proven to be half-empty. A paradoxical situation developed: it had taken so many years to build this one and only shop, and now they wanted to shut it down and dismiss the workers!

Meanwhile the plant for many years had been in serious need of remodeling and the renewing of its production assets. The local party and soviet agencies went knocking persistently on the doors of the branch ministry for a long time. Finally, in the early 1980's the people there agreed with their arguments. On the request of the party's obkom, representatives of USSR Minpribor visited the plant more frequently, worked together with the instrument-builders to develop a complete program for the plant's remodeling, and also gave sympathetic speeches at the plant workers' party meetings. Time, however, convinced people that, for the most part, this was just fake action, done for show purposes. Actually, the attitude taken to the plant at USSR Minpribor continued to be the one taken to a provincial enterprise. It was apparently for that reason that its vital needs and problems, for the all-union headquarters in the branch, continued to remain something far away, obscured by the long-distance haze. Most frequently they were dealt with by "sewing patches" onto them, with the major decisions being postponed until later. And that is how it lasted for years. In the instance that was mentioned, for example, they acted in a manner that is simple to the point of banality: they adjusted the plan in the direction of reducing it -- and that's all there is to it! In a word, they drove the inveterate disease inward, attempting to conceal its symptoms from the broad public. Suffice it to state that the plant management at that time, in order not to attract the wrath of its ministry and in the fear of revealing their own omissions, took pains to prevent the local journalists from learning the true state of affairs. That

is why the truth about them at that time did not get onto the pages of even the oblast newspapers.

Soon, however, a game of personnel "musical chairs" began in the plant management. The enterprise was again shaken by arrhythmia, and began rattling like an old cart on a road full of potholes. A word that began to be heard more and more frequently in the plant workers' lexicon was "adjustment." Bonuses began flying away not only from the managers, but also from the ordinary workers and the ITR [engineer-technical workers]. The labor glory of the Kokchetav instrument-builders was on the point of growing dim. And it was only with the arrival of V. Shlychkov, who, incidentally, is the fourth director in the past ten years, that their staggering actions began slowly but steadily to even out. Last year, for example, the unadjusted but legal state sales plan was overfulfilled by them by almost 3 percent. A decent growth rate was achieved. The plant began operating profitably, receiving approximately 6 million rubles of profit. The assignment was also surpassed for such a very important intensification indicator as the return on investments. And one more thing: more than two-fifths of the output was produced with the state Quality Seal.

The first major success after several unsuccessful years, however, did not do anyone a good turn. A few people felt that the most difficult days were already behind them. Therefore they took an overly confident attitude toward the state acceptance, as though it would be just the next in a series of measures. Then, suddenly, during the first days of January, the first accident occurred, and two weeks later the second one, in the same shop No. 3. Then there was a third accident, but this time in another shop. The result proved to be deplorable: the plant failed to fulfill the January assignment. Now the people here feel that of the 17 percent not taken on the plan, only 7 percent is the share of state acceptance. Actually, approximately the same amount of output failed to get to the customers because of the "veto" that had been put on it directly by the new control service. However, its influence cannot be forced in any way into the Procrustean bed of the four actions of school arithmetic.

Let us take the following example. In January 92.7 percent of the output passed through state acceptance at the first presentation. That's a rather high percentage! Nevertheless the plan was not fulfilled, although there was "finished" output in the shops. If that had happened prior to 1 January the plant's OTK, closing its eyes in the customary manner to many of the deviations from the GOST [all-union state standards] and the other technical-norm documentation, would have put its stamp on it and that output would have been riding the rails to the consumers. Then the plan would have been in good order, and people could have counted not only on good earnings, but also on a sizeable bonus. However, state acceptance is not something "in their pocket," like the plant's OTK. From the very first days of the new year, the plant workers felt that they would not be able either to persuade state acceptance to do anything, or to bypass it. And that is what forced them to "turn to themselves," and, after repeated accidents like the one that happened on 6 January, they began seriously to assure quality at every work station. Now, as the plant's chief engineer Yu. Solonskiy put it, all the parts and articles

are first carefully "licked clean" and only then are submitted to the nondepartmental control.

Thus the very fact of the appearance of state acceptance at the plant forced the instrument-builders to take a more self-critical look at their work and to begin to restructure it, so to speak, on the run. The turning point in their awareness toward quality is visible, for example, on the basis of the changing attitude to the plant's technical control. Theoretically, even previously everyone understood that it is a very important component of production, but in practice the attitude taken toward it was as though it was an annoying hindrance on the path to the achievement of the largest gross indicators. It was difficult to expect another attitude from the economic manager if, as a result of failing to fulfill the plan, he could be removed from his assignment, but for failing to keep the quality high, he could at worst be reprimanded. And even that was not always. But now, when the plan depends not only upon the quantity, but also upon the quality of the articles, the OTK is beginning, more and more, to play at the plant the role of an objectively necessary link in the technological process.

By its uncompromising nature, state acceptance also forced people to undertake to eliminate those bottlenecks to which the plant workers had become accustomed to taking an attitude as to something of secondary importance, although one would have thought that everything should have been just the reverse. It was known long ago, for example, that in economic competition the one who wins is the one with the more progressive technological scheme. The extent to which this truism was at variance with the plant practice is attested to by the fact that rather frequently the people there failed to engage properly in the adjustment of the technological process. In a number of sectors that process had not been checked against the technical-norm documentation for years. It is not surprising that a rather large number of plant workers even forgot how to read blueprints. Frequently they found certain technological resolutions by the trial and error method, frequently acting at such time in the role of "inventors of the bicycle." At the present time, it is no longer just the shop chiefs, their deputies, and the foremen, but also the ordinary workers, who previously did not even remember always where the TU [specifications], GOST [all-union state standards], and other technical documentation were kept, are now referring to them more and more frequently and checking their work against them. The people at the plant have begun devoting more attention to the rigging, the maintaining of record sheets for the equipment, and the certification of work stations.

Unfortunately, much will have to be begun, as the expression goes, from ground zero. For example, the plant has almost a thousand suppliers, a large number of whom are continuing to work according to the old method, without the state acceptance. Frequently they deliver components which are of poor quality, and they violate the contracts with regard to the shipments of specific items. All this weakens the efforts of the plant workers to increase the quality of their output. It was urgently necessary to organize admission control, but that did not happen, because previously it was mentioned basically at theoretical seminars, but it was not mentioned as a practical task until today. This required plant space, control-measurement devices and instruments, but also, most importantly, it required people with the



appropriate education and experience, as well as a wage fund for them. Naturally, they did not include anything promptly in the technical, industrial, and financial plan, even though, at the moment when that plan was being prepared, everyone already knew that the instrument-builders would have to work under conditions of state acceptance. Even in this respect the plant collective took an "easy does it" attitude toward such a responsible matter. And no one correctly it promptly, no one suggested anything to do. Questions like this are being encountered today at every step. However, whereas yesterday people attempted to remember them less, today life itself forces people to carry out a time-responsive search for answers to them. It is gratifying that much in this regard at the plant is being done not only under the effect of state acceptance, but also with its immediate participation.

The new control service has a total of 17 people, and only one of them has secondary special education. All the others have higher engineer-technical education. Many of them, on the basis of their previous experience, know the specifics in the work of the instrument-builders. Their chief, A. Dzhusupov, for example, used to work here as chief designer, and more recently as the plant's deputy chief engineer. Not a single department at the enterprise has such a concentration of engineer manpower. And the fact that administratively and materially they are not subordinate to the plant management, but are part of the USSR Gosstandart system, makes the new control system truly independent and authoritative. To be completely frank about it, if this had happened any other way, state acceptance would not have been able to cope with the role of a very important instrumen  
other way, state acceptance would not have been able to cope with the role of a very important instrumen, would have  
trampled it to the benefit of the notorious "gross." But now, together with the already existing evaluation indicator -- "fulfillment of shipment pledges" -- state acceptance has been objectively called upon to help the decline of the so-called "diktat of the producer" and to help confirm as a very important motivator of scientific progress the "diktat of the consumer." In the draft of the Law Governing the State Enterprise, it is not accidental that the following principle is stated: "The consumer's requirements are mandatory for the enterprise, and their complete and prompt satisfaction constitute the highest meaning and norm governing the activity of every labor collective." In a word, it is becoming profitable to produce only what the national economy needs. And it must be in the assigned quantity and variety, and only of excellent quality. Reliable barriers -- not only organizational ones, but also economic-financial and legal ones -- are now being set up against any other approach. And in this sense the state acceptance workers can be called plenipotentiaries of progress at the enterprise.

It is typical that, from the very first days, they began to establish business contacts with the production managers, speaking to them not only as state checkers, but also as reliable allies in the common cause. They spend a lot of time in checking the finished output for quality. There is just one approach: all the articles being produced must correspond strictly to the requirements of the technical-norm documentation. But here too they attempt to be not only strict and uncompromising. Together with the plant workers they travel, if necessary, along the entire technological chain, looking for the causes of defects, suggesting how to eliminate them, and helping to prepare realistic and technically efficient measures. Attempting to prevent the appearance of

defective output at the finishing operations, state acceptance has taken under its "flying control" the distant approaches to the assembly shops, regularly subjecting other sectors that produce the components and parts to unannounced "technical inspections." And when the machine shop suddenly started to produce a large amount of defective output, state acceptance of the most important articles was organized parallel with the plant checkers. This is more of a temporary measure than a permanent one: it is only until the quality of the articles becomes stable again.

The state technical checkers spend a large amount of their work time in the shops. It is gratifying that they go there not as dispassionate recorders of shortcomings and they do not wait for the moment when the output is turned over, but immediately, in the course of production, they make their remarks, and make suggestions if they notice any deviations from the technological scheme or from the required parameters. As the expression goes, they do not "harbor a grudge," but carry out an honest and open search for their own style in the work that is new to them. And even if their actions are not yet indisputable always or in all matters, their businesslike search deserves support. At the same time, to be completely just, we must say that the people at the plant have far from always, or far from unconditionally, accepted the state acceptance and its rigid requirements. Many people have simply proven to be unready for it, primarily psychologically. Analyzing the unsuccessful work in the first month, plant director V. Shlychkov said, "All of us needed January in order to understand the complete complexity of the work under conditions of state acceptance." But February also failed to bring the expected improvement, although the percentage of plan fulfillment, including fulfillment with a consideration of the fulfillment of delivery pledges, rose somewhat. However, the lag for the month and from the beginning of the year continues to be a large one. It has turned out that January wasn't the only problem. It is probably for that reason that state acceptance is having trouble settling in, and in the constant struggle against old views and habits, in the conflict with the psychology of being a dependent and of complacency that is still being retained by a rather large number of the plant workers. Not all of them are withstanding the quality test.

#### Quality Testing

Alma-Ata KAZAKHSTANSKAYA PRAVDA in Russian 4 Apr 87 p 2

[Article by KAZAKHSTANSKAYA PRAVDA correspondent G. Maslov, Kokchetav, under rubric "State Acceptance Takes an Exam": "Quality Test"; second part of two-part article]

#### [Text] 2. Arousing People's Conscience

Early in March Category I designer S. Ryzhkov became an unusual "birthday boy." One of the best state acceptance workers at the Kokchetav Instrument-Building Plant, he was the first among his coworkers in the new service to receive a reprimand. And he received it -- would you believe? -- for being excessively diligent. On 28 February (which, we might note, is the last day of the month) he carried out a quality check on 7 times more output than the norm specifies. He put himself, as the expression goes, in the position of



the collective in shop No. 2, for whom the plan was threatened with nonfulfillment. But with overloads such as this, it is practically impossible to guarantee the reliability of the control. Where, then, was the sense of creating the new agency? It is not far from this to the discrediting of the agency.

The reprimand given to the state acceptance worker had been brought about by the last-minute storm tactics and "all hands on deck!" methods. During the first ten-day period of January, 17 percent of the monthly volume of output had been submitted to state acceptance; in the second ten-day period, 27 percent; and in the third, 56 percent. And, moreover, a large part of the work load in the final ten-day period was during its last days. In February the situation did not change. As of 24 February, articles in a volume that was close to half the monthly assignment was submitted for checking. One can imagine how feverishly the production workers and the OTK and state acceptance workers had to work during the remaining four days. The sharp arrhythmia recently has become not the exception, but, if anything, the rule in plant life. The fight for quality under such conditions is being made many times more complicated.

Among the causes of this inveterate disease there are many which depend basically upon the instrument-builders themselves. But the chief deterrent to acceleration continues to be the problem of material-technical supply. And all this is because that problem introduces disorganization into production. The impression is created that the problems of restructuring and acceleration that the plant collective has encountered do not affect the territorial agencies of Gosnab which are situated in Petropavlovsk, Tselinograd, and Pavlodar. At least the instrument-builders have not yet sensed any noticeable improvement in their work. On the contrary, since the end of last year the supplying of the plant has become considerably worse, and since January of the current year it has become absolutely intolerable. It is as though a few people have deliberately given themselves the goal of putting in an awkward situation the oblast's only enterprise that has changed over to operating under conditions of state acceptance.

Incidentally, the lack of balance and the lack of material support of the plans, like an evil fate, have pursued the Kokchetav instrument-builders for a long time. There always was more than an ample supply of incidents such as this, but let us take as an example one of the freshest ones. The plant is the country's only producer of dial indicators. Its automatic weighing devices also have an increased demand. One of the basic components for them is the D-ZMI device. Currently there is a need for 32,000 of them, but funds have been allocated for only 23,000. Even the Prompribor Plant in Tallinn which produces them cannot promise any more. It is also a bad situation that the plant began letting the Kokchetav plant down in the first days of the year. With a monthly delivery plan of 2600, the people in Kokchetav did not receive the first consignment until 31 January. Even then it was only 200 of them. And they did not actually receive them, but had to be got by "self-service delivery" from the airport in the city of Sverdlovsk, which in this instance became a kind of intermediate base.

In a word, it is frequently necessary for the economic managers to "get hold of," to "knock out," and even to beg for that which belongs to the collective according to the right of a planned economy, even nowadays, despite the strict legislation existing in this question. According to the frank statements made by many administrators, every ruble invested in a well-organized "self-service delivery" system provides 30-40 or more rubles in the plan. Sometimes they cannot find any other more reliable alternative. Therefore they take the course of paying these costs in order not to lose everything.

In support of what has been said, I would like to give another example of a slightly different kind, but still concerning the same thing. For normal operation in the first quarter the plant needs 748 tons of No. 10 channel. The Main Production Administration of USSR Minpribor and the planning agencies were more than lavish, and allocated 816 tons. Is that good? On paper, yes, but in real life, not very. In order to get the job done, what is needed is not paper, but real metal. And that's what is lacking. And this is all because the Chusovoy Plant in Perm Oblast did not plan to deliver the metal to the people at Kokchetav until the second ten-day period in March. It arrived at the plant shops at the end of the month, when no storm tactics could have saved the quarterly plan. Only once a quarter do they make the rolled metal that is needed to manufacture No. 8 channel, at the Magnitogorsk Combine, and for No. 16 channel at Zapsib, the lack of which is also greatly impeding the instrument-builders. However, the normative reserve of metal articles for the plant has been established at 35 days. One asks: what is the collective to do during the 55 days remaining until the next rolled-metal cycle?

The plant workers have been awaiting the answer to this and other questions from their ministry and the planning and territorial agencies of Gosplan. I would like to say this to the latter. The people at the plant are perplexed: why, in essence, do you remain beyond criticism? Actually, the director gave a report on the January results to an expanded session of the oblispolkom, and early in March at the ministry board. Everyone in the collective knows where and how he was "cheered up." But they do not know anything about what kind of responsibility is borne by those who are a constant coparticipant in the disruption of the plans. And they are not the only ones who do not know anything. The broad public also knows an unjustifiably small amount about the work performed by the material supply agencies. Could this be the reason why certain of them feel that they are in a position of, as it were, reloading bases for a definite part of the scarce resources? The time, however, requires increasing their responsibility also for the material-technical support of the plans, for the sake of which, properly speaking, they were indeed created. In this regard one hears recommendations expressed such as the following. No less frequently than once a quarter they should give oral reports at sessions of the party committees or ispolkoms of the soviets of people's deputies at their place of location and, on a mandatory basis, with the participation of representatives of the planning agencies, ministries, and other interested organizations in the region being served. The public has a right to know about the specific contribution that all the participants in the restructuring have been making to it. Especially the contribution being made by those who, on the basis of their place in social production, are by no means the last spoke in the acceleration chariot.

And something else. One cannot fail to mention the delapidated state of a considerable amount of the plant equipment. It is difficult to believe, but the enterprise in instrument-building -- a branch that has been called upon to be the catalyst in scientific-technical progress -- until recently itself had the right to change during the year no more than 2 percent of its technical equipment. The "rejuvenation" of the plant in this instance occurred once every half-century! Currently the renovation rates have been raised to 12 percent. The plant has received the first groups of machine tools with digital programmed control, and industrial robots and manipulators. Nevertheless the technical re-equipping of the plant has been proceeding very slowly, and a considerable amount of obsolete and obsolescent equipment has accumulated here. Much of it has already been in operation for several depreciation periods each. It is extremely difficult to achieve any stable precision on this kind of equipment. Frequent adjustments and tunings are required. Naturally, the achievement of a large amount of output on this equipment is out of the question. And what about acceleration and quality?

I'd like to introduce Nakhal Andreyevich Spikhachev. It is not difficult to guess that all three names are not the person's real ones, but made-up ones, possibly copied from others who have only with the passing of time become everyday words. I heard them for the first time at the plant. It turns out that that is the name that the instrument-builders figuratively stamp on those who become adept at using truths and nontruths to force (to cram!) their inferior output on the workers in the plant's OTK. They are, simply speaking, the sloppy workers who have lost their professional pride and who trample on the plant's good name and the honor of its trade mark. They were the first to sense that, under the conditions of state acceptance, things would be especially uncomfortable for them, and their calm life would come to an end. However, they are in no hurry to yield their positions voluntarily. And even though there are not many of them -- considerably fewer than the conscientious and decent workers -- their aggressive insolence and pernicious influence upon those around them make it impossible for people simply to brush off these "Spikhachevs." " Especially since they have "dug in" not only behind the machine tools and the work benches, but also at the KB [design bureaus] and at various levels in the plant administration.

The workers in the nondepartmental control system had to come directly up against this phenomenon immediately, from the first days of executing their new duties. And this once again graphically showed everything that quality testing is linked with considerable difficulties primarily of a moral nature. And all this is because it inevitably evokes in the collective the re-evaluation of the well-established ideas and methods, the stereotypes that have formed, but, most importantly, the breaking of old habits and traditional psychology. Currently more and more people at the plant are convinced that the problem of good-quality output is not only, and not so much, a technical one as it is a cadre one, that affects a person's soul, his attitude toward the job and the people around him.

It is not necessary to go far to get the facts. Let's take the shop that is headed by V. Kolosov. It was precisely here that state acceptance, as early as 4 January, for the first time returned for additional work all the 15-ton truck scales that had been submitted to it. However, the warning "ring" did

not produce the necessary reaction and, as was already reported, on 6 January the acceptance of those articles was stopped. So the "Spikhachevs" undertook a demarche: some of the workers on the shift refused to work, giving as their reason the lack of objectivity on the part of the nondepartmental control. It did not take much time to prove the reverse situation. The persons to blame for the defective output were the fitter-adjusters themselves. But their brigade leader, V. Marin, in order to conceal his blame, attempted by dishonest means to deceive the checkers' vigilance. However, he did not succeed in doing this. An act that was morally no less reprehensible was perpetrated by another brigade in the same shop, which is headed by G. Kashcheyev. Counting on the incompetency of the checkers, that brigade, four times in a row, attempted to "cram" down their throats one and the same defective floor scales. The conflict lasted for several shifts, but this time also the tactics did not work. One might also recall the way in which the attempt was made to shift to the consumers a substantial consignment of articles for which the new specifications had arrived promptly, but which were concealed from state acceptance.

What do these examples testify to? First of all, they attest to the fact that any defective output caused by a worker or specialist is not only a violation of a GOST, the technological scheme, or official instructions, but also the disregarding of our moral norms and, if you wish, the result of a deal made with one's conscience. Incidentally, one frequently hears at the plant the statement, "Your conscience is your best checker!" But frequently the people here forget one important factor: in order for one's conscience to cope reliably with such a difficult duty, it must at least be aroused. For that purpose it is necessary at least, for all to hear and with no mincing of words, to call an advanced worker an advanced worker, and to call a sloppy worker a sloppy one. Unfortunately, people do not always do that here. The same Marin and Kashcheyev did not avoid punishment, but their names were lost in a general order in the midst of others like them. But they probably deserved personal attention, if only because they deliberately took the course of producing defective output and being deceitful about it. But there is not a single word about this in the order. And are we really to believe that this is the situation when the self-seeker should find the earth burning beneath his feet?

Nevertheless, as the expression goes, the ice has begun to break up at the plant collective. More and more people are becoming aware of the direct link between such categories as the plan, quality, and wages. The slogan "Under the restructuring conditions, rates without quality are not acceleration, but self-seeking!" has dropped from the heights of an advertising poster, directly into the thick of plant life, forcing everyone to think carefully about the place that he occupies in the nationwide struggle for the country's socioeconomic transformation. As generally recognized, in this regard during the two-month period state acceptance has provided more than discussions and empty palaver about "the benefit of quality" or of "how good it is to work well," which were frequently conducted in the collectives in recent years. One can see the effect of the large amount of organizing and educational work carried out in the collective by the party and trade-union committees and the plant administrators.

However, a number of factors cause concern. It is generally known that in the fight for quality, the technological scheme is always precisely that link by grabbing onto which it is possible to pull out an entire chain of problems. Unfortunately, the "pileup" in this matter has proven to be such that the people at the plant at first requested nine months to clean it up. On the insistence of state acceptance, more rigid measures were developed, but they are extremely necessary in this instance. Those measures bring that deadline to 1 May. But people have frequently begun violating them. Basically for that reason alone the acceptance of output at the first presentation in February dropped by almost 4 percent. The positions that were won are being lost, and this is always fraught with the return of sloppiness and lack of organization.

The plant's OTK has also got tired of waiting for organizational reinforcement. Its staffs do not correspond to the increased needs of production; a large number of the technical checkers do not even have secondary special education; and the personnel turnover rate among them is as high as 50 percent. This is not a department, but a passageway that does not do honor to a major plant. Other unresolved questions are those dealing with increasing the payment of labor and the intensification of the material and psychological incentives offered to the OTK workers. And yet they were stipulated as long ago as last summer in the decree of the CPSU Central Committee and the USSR Council of Ministers, entitled "Measures for Fundamentally Improving the Quality of Output."

No proper socialist competition has been organized among the brigades and shops according to the "workers' relay baton" principle, and one cannot yet see even shy steps to create initiatory groups or brigades for excellent quality. The latter situation is especially unforgivable for the instrument-builders, because the brigade headed by V. Pavlenko -- the initiator of the oblast socialist competition under the motto "More, better, with less manpower" -- has already been working there for more than eight years. The experience has been given a "test run" by their coworkers, but it also has not yet become properly widespread at the plant.

In a word, the people at the plant still have a considerable number of unactivated reserves. And the chief one about them is the human factor. In the recently published Message of the CPSU Central Committee to the Soviet People it is noted that the successful implementation of the tasks of the 12th Five-Year Plan depends "...upon the personal attitude taken to the job by every participant in social production, and upon the extent of exactingness with which the voice of labor conscience sounds in the collectives."

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## ADDITIONAL SELECTIONS ON STATE ACCEPTANCE OF PRODUCTION

## Amurstal Experience

Moscow EKONOMICHESKAYA GAZETA in Russian No 50, Dec 86 p 8

[Article by Kh. Tuguz, journalist, and V. Babin, staff correspondent, Komsomolsk-na-Amure, Khabarovsk Kray: "The First Steps"]

[Text] Two months ago the labor force of the plant "Amurstal" was among the few in the kray to make the transition to submittal of finished products to state acceptance. The extradepartmental inspection is conducted by a staff of 20. They include the plant's experienced specialists. For example, A. Nezhivoy, senior representative of state acceptance, is a former deputy chief of the open-hearth shop, V. Zharskiy worked as deputy chief of the No 2 rolling shop, G. Mostovenko headed a group in the central plant laboratory. They all grew up among metallurgists. "They are men of principle who know what they are doing," it is said of them in the plant.

"The trial steps have been taken in an atmosphere of well-wishing," we were told by V. Zatochnyy, head of state acceptance at "Amurstal." "The new requirements force us to look in a new way at customary concepts and to undertake a fundamental restructuring.

More than 6 percent of output (about 5,000 tons of rolled products) submitted for inspection was rejected by state acceptance as not meeting the GOST. The fateful first results were discussed in a joint meeting. Some of the steelmakers even went so far as to express their bewilderment--never, they said, had it been this way before: the steel had gone off to the consumer even bearing the state Quality Emblem. It had been taken by the shipbuilders and construction workers and enterprises of the North.... And now there were many thousands of tons of rejects.

But soon emotions gave way to serious discussions. First, one thing was clear--it was not possible to manufacture high-quality products on equipment when a third of it at the plant is physically worn-out and obsolete. It is difficult to achieve quality with poor raw materials and intermediate products manufactured with breaches of the technology. The line supervisors, brigade leaders and technologists have not all made the psychological preparations for state acceptance. The necessary explanatory and educational work has not been

done in all the collectives at the lower level. There was criticism made at the meeting of specific measures to restructure the work of metallurgists and to improve plant standards and KSUKP [Comprehensive Product Quality Control System].

From the very outset the personnel of state acceptance structured their activity so that oversight would cover production in all stages--from the dumping of the charge to production of the rolled product, packing and shipping of the end product. The principal purpose is to join the metallurgists in seeking ways and methods of improving quality and workmanship.

The experience of "Amurstal" is today being studied at plants making materials-handling equipment, technical electrical products, and other enterprises in the kray, which made the transition to state acceptance in January.

#### Chelyabinsk Steel Mill

Moscow EKONOMICHESKAYA GAZETA in Russian No 50, Dec 86 p 8

[Article by M. Kulikov, deputy director of the Chelyabinsk Center for Establishment of Standards and Metrology, and N. Gerasimov, staff correspondent: "Counting on...Vacillation?"]

[Text] In the office of V. Pirogov, chief of the first section steel-rolling shop of the Chelyabinsk Metallurgical Combine, we found G. Ryapolov, chief rolling mill operator, and other specialists. The mood of those present, to be frank about it, was not very cheerful.

...Rolled products of high-alloy grades of steel go to enterprises in various branches of industry which are on the frontiers of scientific-technical progress.

A comprehensive program for radical improvement of quality and competitiveness of products up to the year 1990 has been adopted in the combine. According to the estimates of the specialists, its performance promises the metallurgists 42.7 million rubles of profit a year. But the results for the first 11 months show that not everything has taken shape as smoothly as was outlined on paper. To be specific, the output of rejected steel has not been dropping.

"This fact is causing particular alarm," says V. Plotnikov, secretary of the combine's party committee. "In October the plant's director A. Litovchenko signed the regulation on self-inspection. Certain collectives and workers were granted the right to use their personal stamp if for 6 months they have had no criticism concerning product quality and no cases of breaches of technology. Those who are entitled to that stamp get a 25-percent addition to their production bonus."

...And here is what state acceptance showed on the "780" mill: some of the product was being manufactured with a departure from the GOST. The rolling mill operators immediately joined the representative of extradepartmental



inspection and during our visit analyzed the causes of the rejects and looked for a way out of the situation.

"A complicated situation has come about on the machine," G. Ryapolov related. "Its reconstruction has been drawn out. We have been unable to solve the problem with our own people. There is no head machine-building organization which would manufacture equipment to update mills making shapes and merchant-mill products."

This was done at one time by the Elektrostal Heavy Machine-Building Plant, but now the metallurgists are asking Mintyazhmash to place its orders with one of its enterprises. Often these requests are like a voice crying in the wilderness. Meanwhile there are six mills of this kind in need of reconstruction at the Chelyabinsk Metallurgical Combine.

"We do not have enough funds of our own for these purposes," explains P. Yevstafyev, deputy chief of the technical department of the combine. "Jointly with 'Uralmash' and the Novokramatorsk Machine-Building Plant we have gained experience in effective and rapid reconstruction of blooming mills and sheet mills, but we are unable to apply it on section mills--there are no manufacturers of the equipment."

Nor have the machine tool builders always been providing assistance to the metallurgists. Five years ago the Odessa Design Office of Minstankoprom and the Voronezh Machine Tool Building Plant joined the people from Chelyabinsk in undertaking to build an experimental machine tool for machining large rolled products, but the job was never finished. It stands today on mill "780" as a monument to mismanagement.

M. Vorobyev, V. Murkin, and A. Romanov, senior rolling mill operators on the wire mill in the second section mill shop talked to us about difficulties in repairing equipment.

The combine's 23 shops have been making the transition to state acceptance as of the first of the year. Its staff has been filled with highly qualified specialists. The new department is establishing close businesslike contacts with the collectives of the shops and has been operating according to a single plan.

The effort is also going forward in a serious way at a number of other enterprises in the oblast--the Magnitogorsk Metallurgical Combine, the calibration plant, the Chelyabinsk Pipe-Rolling Plant.

Unfortunately, there have also been cases of delays in organizing state acceptance.

"We are having a great deal of trouble completing our staff," says N. Dudarev, director of state acceptance at the Chelyabinsk Forging and Pressing Plant. "That is why schedules are not being met for spot checks in the shop, and the examination of normative-and-technical documentation is going slowly. There are still many outdated monitoring and measuring instruments. N. Kuznetsov,

chief production engineer, and V. Stezhkin, chief metallurgist, have essentially let an important job take care of itself."

We felt this acutely in talking to the foreman and supervisors of the spring shop. What should have been done in October and November was moved here to December and January.

"We will have to make up for lost time," Ye. Romanov, the plant's chief engineer, acknowledges.

And this is the result: state acceptance is doing its thing and the plant is doing its thing. The same picture has taken shape at the head plant of the production association "ChTZ imeni V.I. Lenin" (general director N. Lozhchenko). At the beginning of December state acceptance had filled only 8 out of 88 staff positions. The tractor builders essentially were not coming forward to get the new system of quality inspection running. The collectives might pay a high price for counting on vacillation.

#### Gorkiy Television Plant's Success

Moscow EKONOMICHESKAYA GAZETA in Russian No 50, Dec 86 pp 8-9

[Article by V. Mochalov, director of state acceptance, N. Maslikova, chief of the trade department of Sportkultorg, and V. Varavka, staff correspondent, Gorkiy: "Coming Closer to Order"]

[Text] In front of us we have a document on the results of an inspection for product quality at the Gorkiy Television Plant imeni V.I. Lenin in October 1986. Approximately two-thirds of the "Chayka-738" color sets, which have been in production for a long time now, were accepted on the first submittal and sent to the warehouse. About 16 percent of the promising products Ts-280-D by the same name were rejected and sent back for correction of various defects.

Some time ago these figures might have seemed absolutely erroneous, especially since the enterprise was considered progressive in the oblast and in the branch. Meanwhile at that time there were just as many defects of all kinds and departures from the technology as there are now. They simply were not noticed by the "internal" inspectors and were found only after shipment--in the trade sector, and still more frequently--by the customers. Liberalism and self-deception in the production workplace ultimately made headaches for those who received what essentially were rejects, and there were additional costs for repair.

In the spring of 1985 four representatives of Gosstandart came to the plant, not as a temporary commission, but as a permanent commission on the register. Their task was to discover the main reasons for the rejects, to set up a strong barrier to them, to help the collective overcome the dangerous illusion that things were as they should be. In other words, an extradepartmental oversight group had begun to operate by way of an experiment. The management in the person of enterprise director V. Kopylov and certain supervisors of subdivisions were not delighted at that time to meet the "independent

inspectors." At first they used various pretexts not to issue them passes and they dragged out for several weeks the allocation of workspace and a well-equipped stand. But still they had to receive the "uninvited guests," and the latter began to perform their duties, which are not easy.

They took television sets from every line and checked them over with great care. At the same time they thoroughly analyzed all the criticisms recorded by personnel of the plant OTK, but which were not corrected before shipment. It turned out that the necessary precision could not be guaranteed because of the low quality of measuring equipment. A substantial portion of the rejects resulted from the low level of work discipline and production discipline of individual workers and foremen.

It proved to be insufficient merely to talk to those responsible, and penalizing them financially had no effect. That is why they resorted to the extreme measure of prohibiting shipment of the product to the trade sector. Several times the enterprise ran aground, as they put it. Its management appealed to various authorities, but, as they should have expected, no one made concessions. Nor were V. Kopylov's hopes borne out that the personnel of Gosstandart would "soon go away" and it would be much easier without them." Permanent state acceptance was instituted at the enterprise beginning in April 1986.

The television set's assemblies and units are not manufactured by a single person, but by brigades; that is why great importance is attributed to selection of responsible and highly qualified personnel. Yuriy Ivanovich Yermolayev and Vasiliy Mikhaylovich Kurylenko, adjustment brigade leaders, are rightly pointed to as models for others to copy in the plant. Party member Vera Vasilyevna Krapivina and Komsomol member Tatyana Potapova, technical inspectors, and Oleg Vasilyevich Tatarchuk, deputy chief engineer, can confidently be called true sentinels of the interests of customers.

But one also encounters those who have been abusing the confidence placed in them and have been committing acts alien to an honest workingman. Because of the many rejects the enterprise has fallen back among the stragglers, and proceeds have fallen off greatly. Acting shop chief G. Koralov and his joint author Yu. Kuzmin, deputy plant director, engaged in padding in order to "change the picture for the better." However pernicious it might seem, they were joined by L. Kuznetsov, representative of state acceptance, who had previously worked at the same plant. The comrades have brought this compliant fellow back to the straight and narrow and have harshly condemned his actions and demanded the most severe punishment.

State acceptance personnel have been doing a great deal of painstaking work with suppliers, and it is already yielding good results. Until recently picture tubes were arriving from the Voronezh Electrovacuum Devices Plant with numerous defects. Representatives of that plant often came to Gorkiy to acknowledge the claims, but more often they still rejected the claims, calling them nit picking. When Boris Mikhaylovich Shabanin, a prestigious specialist, went to Voronezh, representatives of the Simferopol "Foton" and Gosstandart went there as well with the same questions. Facts are a stubborn thing. The people from Voronezh have had to admit them, and today matters have begun to

improve, although it is still early to talk about things being altogether as they should be.

There has been a noticeable improvement in the quality of the radio channel units supplied by a neighbor--the Sormovskiy "Lazur" Television Plant. The inspection foreman of that enterprise Tatyana Alekseyevna Klementyeva told us that the collective was altogether capable of working without any sort of complaints from the customer. The same attitude is evident in the workers of the Kulebaki Radio Assembly Plant and other suppliers. They have read with interest the open letter published in Issue 48 of the weekly from the workers of the Simferopol "Foton" Production Association and fully support the desire to manufacture an excellent product through joint efforts.

The trade fair in Luzhniki confirmed the demand for "Chayka" television sets from Gorkiy. It is gratifying that after the measures taken the quality of the sets has improved and there has been a corresponding increase in the orders from the trade sector, which now unfortunately cannot be filled completely by any means, which the plant itself can blame itself for.

We will give some more figures. For the first 9 months of this year, compared to the same period of last year, returns of color television sets to the plant from the trade sector and service center had dropped off 18 percent, and in the 3d quarter they had dropped off almost 25 percent. But there have also been cases like this: 40 percent of the "Chayka" sets still have to have repairs during the warranty period. This is a disturbing indicator, but the work force and the plant's suppliers have every opportunity to set up a reliable barrier to rejects in the very near future.

#### Ministry Resistance to State Acceptance

Moscow EKONOMICHESKAYA GAZETA in Russian No 50, Dec 86 p 9

[Article by V. Belchikov, director of state acceptance at the Alma-Ata Heavy Machine-Building Plant, V. Vanyukov, deputy director of the Kazakh Center for Setting Standards and Metrology, and Ye. Kozlov, staff correspondent: "For the End Result"]

[Text] In Kazakhstan state acceptance will be introduced at 38 enterprises at the beginning of the new year. At some of them representatives of Gosstandart have already gone to work. They have reported that many collectives are not ready to work in the context of the higher requirements as to product quality.

The Alma-Ata Heavy Machine Building Plant is the republic's progressive enterprise. Still state acceptance has reported that 70 percent of the documentation for machines being manufactured do not meet the requirements of GOST's. Now this documentation is being redone.

"By the end of 1987 we will bring everything up to the standard," assured O. Usenko, the plant's chief designer. "We were unable to do it before, it is a big job."

Unforgivable nonchalance in the past is being compounded by a lack of resourcefulness on the part of the manager in the present. Will the plant be working according to the old documentation for the entire year? Who gave the chief designer that much time?

The representatives of state acceptance have been analyzing the operating precision of machine tools. It has turned out that only 30 percent of the equipment meet the information contained in the passport. A group of machine tools have had to be repaired and adjusted.

The plant did not have the necessary measuring instruments, especially for checking gearing. The department of the chief mechanic did not show concern for providing production sections with instruments for checking alignment and perpendicularity of holes drilled in body parts.

"Every year the orders for measuring instruments are not filled," complains the plant's chief metrologist V. Perelekhov.

They are not satisfied, and that is all. Nor is anyone to blame for the failure to really solve the problem of inspecting electrical equipment and hydraulic apparatus when they arrive. This is now being done with the naked eye, since there are no special stands for this purpose.

The party committee also has a lot of training work to do. The responsibility of many workers is still at a low level. For instance, representatives of state acceptance have returned for additional work worm gears for a winding apparatus: Their quality was previously checked with jigs and fixtures which had not been certified, and the chief of the technical inspection office of the second machine shop V. Bykovskiy, who had been passing these products, saw nothing very bad in that. Or take this case. When they submitted the reducer, the workers did not deliver the scraper for picking up the oil. In their opinion, this was a trifle. But the absence of this "trifle" could upset the lubrication and cause the reducer to fail.

At the Alma-Ata Garment Association imeni 1 May the first state acceptance was conducted in October. An unsightly picture was revealed: 60 percent of the garments which have been accepted by the OTK were sent back to be redone. The main reason were defects of a technological nature: things were crooked and parts were not placed symmetrically, top stitching was not straight, and so on. They held meetings in the collective, and the situation improved somewhat. But the recent results again indicate that their actually has not been a radical improvement of quality. Product returns are still high--35-40 percent.

The numerous alterations have disrupted the pace of production. The garment association is falling short of its targets by half. The conclusion is clear: personnel need training, they need to improve their qualifications, and production needs to be perfected. But the management of the association (general director N. Mulyavin) is attempting to pass the blame for nonfulfillment of the plan to the representatives of state acceptance, who supposedly did not make this their first priority. However strange it may seem, this position has been supported by deputy minister of the republic's

light industry V. Shapoval. Although she noted at the same time that the management should get along with people better.

At the same time it is worth listening to the warranted demands of the enterprise's collective. They first of all concern the shortage of fabrics of the necessary colorings and finishing. Nor has the problem been solved about straightening out the GOST's. For example, the GOST for pure wool and wool-blend fabrics allows them to be evaluated in the first grade if there are 15 defects, but first-grade garments from these fabrics are allowed only 2 defects. And there is an abundance of such discrepancies.

#### Tbilisi Electric Welding Equipment Plant

Moscow EKONOMICHESKAYA GAZETA in Russian No 50, Dec 86 p 9

[Article by L. Shcherbina, Tbilisi: "A Test"]

[Text] "He considered me his friend. But why did he feel? After all, did I betray him in some way?" For a long time these thoughts tortured Badri Ivanovich Tabatadze. Understanding did not come immediately, but it came: No, you still were right to break off with him. How many encounters and conversations! But some things had changed since....

What was it that disturbed B. Tabatadze, secretary of the party bureau of the Tbilisi Electric Welding Equipment Plant imeni Ye.O. Paton? What had caused him to break with Georgiy Ashotovich Kevkhayev, chief of the OTK?

...This July in a meeting of the party bureau a report was read by party member G. Kevkhayev, chief of the technical inspection department, about the work of the department he heads in order to improve product quality. The plant's collective was preparing for state product acceptance.

It was to be introduced in stages: in October 25 percent of the equipment would go through extradepartmental inspection, in November 50 percent, in December 75 percent, and as of 1 January representatives of Gosstandart would have the plant's entire output at their disposition.

The discussion in the meeting of the party bureau seemed to be good. There were no differing opinions, nor could there have been: product quality had to be improved, and it had to be done by making the inspection system more effective.

The enterprise is among the best in its branch: It has been fulfilling the plan regularly, it has been raising labor productivity, and more than 70 percent of its products are manufactured bearing the state Quality Emblem, but still there is a great deal of untapped potential. Don't do everything at once. But those that seem to be on the surface can also yield a sizable result, they merely need to be activated.

Jumping ahead, I will say that the defects detected when the welding equipment was submitted to representatives of Gosstandart were mainly the result of carelessness, of a lack of conscientiousness, of haste. Thus from the very



first days of the introduction of state acceptance the problem of strengthening discipline, order, and organization, of making all the workers more responsible for their work, had to be solved without delay.

But first came the report of the chief of the OTK: losses from rejects are dropping, more vigorous financial penalties were being imposed on those who produced rejects, the number of quality achievers, those who could confidently place their personal stamp on their products as evidence of irreproachable work was rising.

The speech sounded good. But in the shops...they were continuing to "rob" the technology. Yes, that is precisely the expression used by Guram Artemovich Laliashvili, leader of the mixed brigade in the preparatory shop. Instead of the 10 operations envisaged by the technology, they were doing 7. They replaced one material with another, whatever came to hand. They shortened the time for tests. Who knew about it?

Everyone knew, everyone saw it. And they didn't object? Usually not. Because the unique instinct of self-preservation suggested: here breaches are possible--no serious consequences are envisaged, but here be careful!

As it turned out, instinct did a bad turn. As happened, for example, at the end of last year, when claims came in against the plant's products. Specialists had to travel to correct the defects, and new equipment also had to be shipped out in place of the unsuitable equipment. The party bureau then punished many people severely: the chief of the OTK and the deputy chief of the sales department and members of the brigade who had produced unsuitable units. It was recommended that the plant director take up the question of whether the deputy chief of the machine assembly shop and the chief of the production engineering office were qualified for their positions. (They were later transferred to other less responsible sections.)

What happened taught caution.

"At one point the workers of one brigade came to me," B. Tabatadze, secretary of the party bureau, relates. "They were embarrassed at first. I could understand them in human terms: They were complaining about a comrade, and we are not accustomed to that, brigade problems are solved as a rule within the brigade...."

However, once Badri Ivanovich had learned the nature of the conflict, he himself literally became alert. On the one hand he could not but be gratified that they had come to him, to the party bureau, for help, which meant that they had confidence. But on the other.... To be honest, he had little liking for all this. It was not such a complicated conflict, he felt, that it needed to go beyond the limits of his collective. No, then, there was real friendship and comradely mutual understanding in the brigade when they were unable to get two sloppy workers back on the track.

Those two were actually gaining by "robbing" the technology. Sometimes they would go home although the process of impregnating parts had not yet been completed according to the manufacturing instructions. No problem! It will



be alright. And for a time it was alright! Until the attitude toward quality began to change under the impact of the new form of inspection.

This case turned out not to be nearly as simple as Badri Ivanovich had thought at first. No, he had occasion to participate not only in resolving the conflict in the brigade, but also in carrying out the task advanced by the party: restructuring people's thinking and psychology. It was later when he came to understand that, when matters in that brigade had straightened out, but if we want to be altogether accurate--when they appealed to him once again for help.

Georgiy Ashotovich Kevkhayev survived: For a time they did not react at the plant to the workers' criticisms of his department. As a matter of fact, quite often what he himself requested from the heads of particular subdivisions had no results. Even he made a request, perhaps as a friend:

"Badri, help me out! The party bureau still has prestige."

Tabatadze had not prepared decrees for this situation. He went out into the shops, he talked with people. With all of them differently: he knew severity would work with one, with another a reproach, while yet another would need helpful advice. Anyway that was his job--to work with people directly. But there was a moment once when he seemed to look at what he was doing from a distance. And at that point he said to himself: stop, you must not be a prop for someone else's weakness and use the prestige of the party bureau to patch up someone else's holes. And it was then that he understood how different in nature were the requests for help addressed to him by the workers and by the manager.

He hoped that in the meeting of the party bureau G. Kevkhayev, who was a member of the party, would in delivering his report speak specifically about these difficulties, the difficulties of managing and administering the department--would attempt to seek their causes, and would see those causes even in himself. But no.

The work of the OTK to improve the quality of the products produced was found to be inadequate, and this was pointed out to G. Kevkhayev. There is one way of going about this. It is literally the yellow card which the plant's inspectors issue to someone who has produced a reject. One more breach and you get the red card, and unless you do well you give up your personal stamp if you have one. But applied to a manager the question might be put this way: Make way for someone else with more initiative, ability, and knowledge.

It is not easy to tell a man who has given quite a bit to the plant: You are not up to your job. You are not so much afraid of causing offense as not being understood. Having learned what is what, in time a man gains mastery over himself and takes the side of fairness. If he surrounds himself with a wall of alienation, there is no argument that he will find sufficient. And what kind of situation comes about in the collective in that case? What guarantee is there that there will not be talk to the effect that he spent his whole life at the plant, and they turned him away from the door. So courage is simply indispensable in such cases, though incidentally so are sensitivity

and objectivity. And the cases are increasingly frequent in which they must be displayed both by the management and by the party bureau.

So the secretary of the party bureau was pained by the question: Had the director of the OTK been given a chance to restructure himself?

After the memorable report in the session of the party bureau B. Tabatadze talked to Georgiy Ashotovich more than once and more than twice. The question had to be settled once and for all: state product acceptance was beginning. People's inspectors, shop party organizations, party groups, and all of the enterprise's 175 party members were making active preparations for it. They closed many loopholes through which substandard products had made their way, they systematized the manufacturing instructions, they made the necessary jigs and fixtures, they completed the job evaluation, they introduced a three-shift operation in the most productive sections, they organized closer contacts with suppliers. It was no longer a question of adjusting to the new requirements--those were not the right words to say from the speaker's platform. To meet the high requirements one had to work on himself, to grow. Not everyone managed this. The head of the OTK was one who didn't. He no longer holds that position....

As of the first of the year representatives of Gosstandart will become full-fledged masters and helpers at 22 enterprises in the republic. And every party organization will be taking a unique test of its militance. There is still quite a bit that needs to be done at the Tbilisi Electric Welding Equipment Plant to improve the quality of products produced. But it passed the first test with honor.

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CSO: 1820/123

## STATUTE ON PROFIT DISTRIBUTION UNDER SELF-FINANCING

Moscow EKONOMICHESKAYA GAZETA in Russian No 15, Apr 87 p 23

[Model Statute approved by the Commission for Improvement of Management, Planning, and the Economic Mechanism in Protocol No 54, dated 3 March 1987: "Model Statute on the Normative Method of Distribution of Profit in the 12th Five-Year Plan for Associations and Enterprises Which Have Made the Conversion to Full Cost Accounting"; first paragraph is EKONOMICHESKAYA GAZETA introduction]

[Text] In Nos 47, 49, 51, and 52 for 1986 EKONOMICHESKAYA GAZETA published model statutes approved by the Commission for Improvement of Management, Planning, and the Economic Mechanism on the procedure for the formation and use of economic incentive funds, the wage fund, and the financial reserve of enterprises which have made the conversion to full cost accounting. The "Model Statute on the Normative Method of Distribution of Profit in the 12th Five-Year Plan for Associations and Enterprises Which Have Made the Conversion to Full Cost Accounting," approved by that commission (in its Protocol No 54, dated 3 March 1987) and confirmed by USSR Minfin, is published below.

This Model Statute provides the procedure for distribution of profit according to the stable rates fixed for associations and enterprises (1) operating under the conditions of full cost accounting and self-financing (excepting enterprises in light industry).

1. The rates of the deductions from profit into the state budget and to the ministry, and also the rates for formation of economic incentive funds are set on the basis of the proportions of profit distribution for those purposes that occurred in the base year and also the targets and calculations of the 5-year plan. These rates are broken down to enterprises in good time and are stable for the 5-year planning period.

Ministries may differentiate the rates of the charge on productive capital and the rates of deductions from profit into the budget from enterprise to enterprise (enterprises of USSR Minkhimmash make these payments into the budget in proportions differentiated as a function of profitability in accordance with a procedure established by the ministry). The setting of these rates and standards must guarantee correspondence between the proportions of the charge on productive capital and the transfers from profit into the state budget at the enterprises and their proportions for the ministry as a whole.

The rates of the charge on productive capital, profit and the rates of transfers from profit into the state budget (including the local budget) are set for the enterprises by their respective ministries (departments).

The procedure of the accounts with the budget related to payments from profit shall be set forth by the USSR Ministry of Finance.

2. Settlement shall be made with the budget with respect to profit obtained from the sale of products, jobs done, services rendered, and other financial results taken into account in accordance with the methodology in effect in the planning of profit (profit from operation of housing and utilities, profit (losses) in the handling of containers, etc.). Moreover, additional profit obtained from incentive supplements for efficiency and product quality is also included in the actual profit from product sales.

Unplanned income, expenditures and losses, including amounts received and paid in the form of economic penalties, shall remain at the disposition of enterprises or shall be charged to the profit left at their disposition.

3. The planned and actual profit from the sale of products, jobs done, services rendered, and other financial results taken into account in the planning of profit (for all types of activity carried on the balance sheet of enterprises) shall be committed to the following purposes:

- a. payments into the budget of the charge on productive capital at the duly established rates;
- b. transfers from profit to the state budget, including the local budget, (2) at the established stable rates which are applied to profit after the charge on productive capital has been deducted from it;
- c. transfers to the ministry to form centralized funds and reserves at a stable rate applied to profit after the charge on productive capital has been deducted from it.

For enterprises of USSR Minkhimmash the rates indicated in Point 2, Subparagraphs b and c, shall be applied to profit from which the charge on productive capital has not been deducted.

4. Before it is assigned to the purposes indicated in Point 3 planned and actual profit shall be reduced by the following amounts:

- i. the temporary supplement to prices on new goods of improved quality insofar as it has been committed to the fund for development of production, science, and technology, the fund for social welfare and cultural programs and housing construction, the enterprise's financial reserve, or the price adjustment fund of the ministry (for enterprises of USSR Minneftekhimprom and enterprises of USSR Minlesbumprom);
- ii. profit from the sale of consumer goods and products for production and technical purposes manufactured from production waste and local raw materials duly assigned to the consumer goods fund;

iii. profit remaining at the disposition of the enterprise for other purposes in the proportions fixed by decisions of the USSR Council of Ministers.

The sum of transfers at the end of the year to the material incentive fund within the limits of the unused saving on the wage fund against the established allowance shall also be deducted from the actual profit obtained by applying the procedure in effect. These deductions are made within the limits of the actual profit obtained over and above the amounts envisaged in the plan.

In addition, profit obtained on the days when Communist Saturdays are held shall be omitted from actual profit.

The additional profit which an enterprise actually obtains on the basis of incentive supplements to wholesale prices on highly effective products whose parameters meet the best domestic and foreign standards and products bearing the State Quality Emblem shall be used according to the general procedure at the rates established for distribution of profit.(3) Transfers to the budget from this profit on the basis of quarterly and annual reports for 1987-1988 may not exceed 30 percent of their total amount.

It is prohibited to confiscate profit and redistribute it within the branch or sector when this has not been envisaged by legislation and does not arise out of the relations established by this Statute between the enterprise and the ministry.

5. Planned profit and the profit actually obtained and remaining at the disposition of enterprises after payment of charges to the budget and transfers to the ministry shall be assigned to the following purposes at the rates established:

- i. to the fund for development of production, science, and technology;
- ii. to the fund for social welfare and cultural programs and housing construction;
- iii. to the material incentive fund.

The rates of transfers to these economic incentive funds shall be applied to the profit remaining at the disposition of enterprises.

6. The actual profit remaining at the disposition of enterprises shall be subject to the following deductions (additions) before its distribution among the purposes indicated in Point 5:

- i. the total amount of bonuses awarded according to the results of the all-union and republic socialist competition;
- ii. the total amount of unplanned income, expenditures, and losses, including amounts received and paid in the form of all economic penalties (excepting those charged to the production cost of products and services, and also deductions from wholesale prices on products assigned to the first-quality category

in certification, products not promptly certified, and also other products subject to be withdrawn from production).(4) Moreover, economic incentive funds shall be augmented (reduced) by the amounts indicated in proportion to the established rates of transfers to those funds.

7. Additional transfers to the material incentive fund when the sales plan is entirely fulfilled and adjusted for delivery obligations in accordance with contracts concluded shall be charged to the resources of the financial reserve (insofar as it is earmarked for that purpose), and should those resources be insufficient--the transfers shall be made by reducing payments into the budget.

8. If enterprises operating at low profitability (5) which have not been assigned rates of deductions from profit to the budget and also enterprises operating at a planned loss do actually obtain profit, payments shall not be made into the budget.

9. Payments into the budget shall be made by enterprises on a decentralized basis.

10. If necessary the ministry, in agreement with USSR Minfin, shall define the peculiar features of applying this Model Statute to the specific nature of the sector's operation.

11. In connection with publication of this Model Statute, as of 1 January 1987 the Model Statute on the Normative Method of Distribution of Profit for Associations and Enterprises Which Have Made the Conversion to Full Cost Accounting, approved by decision of the Commission for Improvement of Management, Planning, and the Economic Mechanism on 23 October 1986 (Protocol No 30) and confirmed by the USSR Ministry of Finance on 30 October 1986, shall cease to be valid.

Examples of the Distribution of Profit of Enterprises Converted to Full Cost Accounting (in thousands of rubles)

<u>Indicator</u>	<u>Plan</u>	<u>Actual Fulfillment</u>			
		<u>I</u>	<u>II</u>	<u>III</u>	<u>IV</u>
1. Sum total of profit from sales, work done, and services rendered, reflected in Section I of the report on financial results (excepting the profit used according to special procedure)	1,000	1,000	1,000	1,040	1,000
2. Charge on productive capital	200	180	220	200	200
3. Profit subject to distribution at the standard rates (Item 1 - Item 2)	800	820	780	840	800
4. Transfers to the budget at the standard rate (40 percent), which is applied to the profit in Item 3	320	328	312	336	320
5. Transfers to the ministries at the standard rate (20 percent), which is applied to the profit in Item 3	160	164	156	168	160
6. Profit left at the disposition of the enterprise (Item 3 - Item 4 - Item 5)	320	328	312	336	320

Table (continued)

Indicator	Plan	Actual Fulfillment			
		<u>I</u>	<u>II</u>	<u>III</u>	<u>IV</u>
7. Bonuses according to the results of the All-Union Socialist Competition	X	--	--	--	--
8. Income (profit) from other sources and sales left at the disposition of the enterprise, expenditures and losses reimbursed from profit left at the disposition of the enterprise (Section II of the report on financial results)	--	--	--	--	+40
9. Profit committed at the standard rates to economic incentive funds (Item 6 - Item 7 - Item 8)	320	328	312	336	360
In addition:					
To augment the material incentive fund to discharge delivery obligations financed by reducing deductions from profit into the budget	--	--	--	--	--
For reference purposes:					
Percentage of fulfillment of delivery obligations	X	98	98	98	98

Indicator	<u>V</u>	Actual Fulfillment			
		<u>VI</u>	<u>VII</u>	<u>VIII</u>	<u>IX</u>
1. Sum total of profit from sales, work done, and services rendered, reflected in Section I of the report on financial results (excepting the profit used according to special procedure)	1,000	1,000	1,000	980	1,040 <sup>2</sup>
2. Charge on productive capital	200	200	200	200	200
3. Profit subject to distribution at the standard rates (Item 1 - Item 2)	800	800	800	780	840
4. Transfers to the budget at the standard rate (40 percent), which is applied to the profit in Item 3	320	320	314 <sup>1</sup>	312	332 <sup>3</sup>
5. Transfers to the ministries at the standard rate (20 percent), which is applied to the profit in Item 3	160	160	160	156	168
6. Profit left at the disposition of the enterprise (Item 3 - Item 4 - Item 5)	320	320	326	312	340
7. Bonuses according to the results of the All-Union Socialist Competition	--	10	--	--	--
8. Income (profit) from other sources and sales left at the disposition of the enterprise, expenditures and losses reimbursed from profit left at the disposition of the enterprise (Section II of the report on financial results)	-40	--	--	--	--



Table (continued)

<u>Indicator</u>	<u>Actual Fulfillment</u>				
	<u>V</u>	<u>VI</u>	<u>VII</u>	<u>VIII</u>	<u>IX</u>
9. Profit committed at the standard rates to economic incentive funds (Item 6 - Item 7 - Item 8)	280	310	320	312	340
In addition:					
To augment the material incentive fund to discharge delivery obligations financed by reducing deductions from profit into the budget					
For reference purposes:	--	--	6	--	--
Percentage of fulfillment of delivery obligations	98	98	100	98	98

1 The transfers to the budget have been reduced by the sum total of additional transfers to the material incentive fund to discharge delivery obligations in the proportion of 15 percent of the planned amount of the fund (320 - 6).

2 Including the supplement for the Quality Emblem--40,000 rubles.

3 Payments into the budget from the supplement do not exceed 30 percent of its size.

## FOOTNOTES

1. Hereinafter "enterprises."
2. The procedure for deductions into local budgets of a portion of profit of enterprises under union jurisdiction shall be set forth by the USSR Ministry of Finance.
3. In view of the particular feature of assigning a portion of this profit to economic incentive funds envisaged in Points 14 and 15 of the Model Statute on Procedure for Formation and Use of the Material Incentive Fund of Associations and Enterprises Converted to Full Cost Accounting.
4. The exception for the accounting of this deduction has been adopted for the period 1987-1988.
5. Enterprises operating at low profitability are those enterprises where their own planned profit is insufficient to form economic incentive funds at the time when they make the conversion to full cost accounting.

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## CONSERVATION VIEWED AS SOURCE OF FUTURE ECONOMIC GROWTH

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 2, Feb 87 pp 16-25

[Article by A. Zaytsev and A. Shkurskiy, deputy section chiefs, USSR Gosplan: "Resource Conservation and Development of the Economy"]

[Text] Increasing effectiveness of utilization of material resources and its importance for intensifying and accelerating the rates of economic development \* Certain organizational questions on resource conservation.

The party's economic strategy provides for a continued increase in the effectiveness of social production as well as the further reduction in the expenditures of living as well as reified labor per unit of national income.

The savings of material resources at the current stage has become a most important factor in the development and provision of high growth rates for the economy, and its importance is constantly increasing. Every year, material-technical resources valued at over 600 billion rubles are involved into social production. Therefore, increasing the effectiveness of their application and reducing the material consumption of production is one of the radical conditions for the continued accelerated development of the economy. With such a scope of production, a 1 percent per year reduction in material consumption of social production is equivalent to a 6 billion ruble increase in the national income, and the conserved material resources may be used to manufacture over 14 billion rubles worth of production. Moreover, a savings in capital investments in a sum of no less than 42 billion rubles is also provided, since the average capital investments required for developing capacities for the production of raw goods, materials, fuel and energy necessary for the manufacture of the products comprises 3 million rubles.

The Basic Directions for Economic and Social Development of the USSR for 1986-1990 and for the Period to the Year 2000 stress that the continued intensification in the regimen of economy is one of the most important factors in intensification of production. On the whole throughout the national economy, the volume of material expenditures every 15 years has increased by 2-2.5 times. This, in turn, requires extensive growth in the extraction and procurement of the most important types of raw materials.

Resource conservation becomes the decisive source for meeting the growing demands of the national economy. The demands for fuel, energy, raw goods and materials must be covered to an extent of 75-80 percent due to their savings by the year 2000, while in the 12th Five-Year Plan--by 60-65 percent. In the next three five-year plans we must reduce the energy consumption of the national income to at least 5/7 of what it is today, and metal consumption--to 1/2.

In generalized form, the work on economy of material resources performed during the past 25 years (from 1960 through 1985) is characterized by a change in the material consumption of gross production in the national economy (in comparable prices; rubles per 1,000 rubles)

1960	1965	1970	1975	1980	1985
493.1	494.8	488.9	494.8	481.9	470.8

Thus, during the indicated period the material consumption has been reduced by only 4.5-5 percent, including in the 10th Five-Year Plan by 2.6 and in the 11th Five-Year Plan--by 2.3 percent. This, quite obviously, cannot be considered satisfactory. In part such a slight reduction is explained by intersectorial structural changes taking place during these years and characterized by the leading development of heavy industry and the investment complex, which are distinguished by their high material consumption of production.

However, the considerably lower rates of reduction in material consumption are a consequence of the prevalence of the extensive method of economic development. That is, in this case the increase in volumes of goods production occurred generally due to the involvement of additional material resources.

It is true that during the years of the 11th Five-Year Plan the absolute values of economy of vital types of resources reached significant proportions. Nevertheless, the tasks on reducing expenditure standards and conservation of these and a number of other resources set for this period were not fulfilled. As a result, the portion of satisfaction of demand for vital types of material resources at the expense of their economy in 1981-1985 comprised, by computation: for primary fuel-energy resources--46 percent; for ferrous metal rolled stock--52 percent; and for cement (in capital construction)--72 percent. With total fulfillment of the tasks on conservation of material resources, this portion would have been considerably greater.

An important role in solving the problem of resource conservation belongs to the condition of reserves of material-technical resources. If we evaluate the movement of production reserves from these standpoints for the years 1970-1984, the situation cannot help but cause justifiable alarm. Reserves are growing faster than product production.<sup>1</sup> Evidently, the insufficiently energetic work on economy of material resources in product production in the last three five-year plans has entailed a leading increase in reserves of these resources, which has become one of the reasons for slowing the rate of economic development of the country.

In recent years, plan effect on the process of resource conservation was implemented generally by means of setting indicators for the economy of material resources in the plans for USSR economic and social development. These were expressed in the forms of tasks for average reduction in the expenditure norms for material resources in percentages of the expenditure norms for the preceding

period (year). The indicated tasks were brought to the attention of the associations and enterprises and served as the basis for development of organizational-technical measures for economy and reduction of material resource expenditure norms in these basic sectors of the national economy. The shortcoming of the indicated form of plan effect on increasing the effectiveness of resource application is that the indicator for average reduction in expenditure norms practically does not express such factors of resource expenditure as renovation of production, change in its quality, and especially productivity and reliability; change in the structure and assortment of manufactured product; reduction of unproductive expenditures and resource losses, and application of secondary resources and industrial by-products. At the same time, we may cite among the negative occurrences the absence of a direct connection between the reduction in expenditure norms for specific types of material resources considered in the plan and the end results of production and its effectiveness. According to the effective regulations, the reduction in resource expenditure norms as provided by plan assignments must be implemented in mandatory order, while the effectiveness of production and its end results in the manufacture of certain, especially new, types of production, may be associated with the need for increasing the expenditure of individual types of resources per unit of production.

Therefore the task on reducing material resource expenditure norms cannot be considered universal or the only possible indicator of resource conservation. This indicator should be related merely to one of the components of a more general concept--increasing the effectiveness of material resource application. In the process of accelerating the socio-economic development, we must formulate a more harmonic structure of production. Behind every percentage point in growth of product production must be qualitatively new products with high consumer qualities. The primary task of the five-year plan is to increase the rate and effectiveness of economic development on the basis of accelerating scientific-technical progress, technical retooling and reconstruction of production, intensive application of the developed production potential, improving the system of management and the economic mechanism, and achieving on this basis a continued increase in the well-being of the Soviet people. Based on these principal directives, we should radically review the organization of planning and the provision of resource conservation.

The basis of the concept of resource conservation should include the effectiveness of utilization of material resources, keeping in mind the relationship between expenditure of these resources and the end results of production and consumption. Here, economy of material resources refers to the absolute or relative reduction in their expenditure, caused by increase in the effectiveness of their utilization.

Increasing the effectiveness of resource utilization is a process whose development reflects the action of a combination of such vital factors as management and plan activity, structure of production, achievements in science, engineering, leading technology and organization of production, as well as social factors. Consequently, the organization of this process is the subject of specific activity at all levels of economic management--from the USSR Gosplan to the enterprise, as well as all the services (technical, planning, economic, supply, etc.). We must define more precisely the rights and responsibilities of all agencies and their services for ensuring the process of resource conservation and its results.

Increasing the effectiveness of application of material resources must become an organic element in the new conditions of economic management. That is, we must make it so that the specific forms of production relations in terms of evaluation and distribution of labor results are defined by the results in the sphere of resource conservation. In connection with this, the June Plenum (1986) of the CPSU Central Committee indicated that: "We must strive to see that the fulfillment of tasks on the economy of resources and the level of their utilization becomes one of the main criteria in evaluating the work of every enterprise and collective."<sup>2</sup> The organization of incentives for the economy of material resources must be improved. Since economy is the result of specific measures, specific people must be rewarded for it. Payment of earned remunerations must be performed regardless of the overall results of economic management activity at the enterprise.

The primary means for increasing production effectiveness, and consequently also resource conservation, is scientific-technical progress, and primarily the improvement of product quality on the basis of this scientific-technical progress. The 27th CPSU Congress stressed that improving production quality is ultimately a question of both its quantity, economy of resources, and more complete satisfaction of public demands.

We must also define the mottos under which socialist competition--the most important form of activation of social consciousness and communist upbringing--is organized and conducted. The cornerstone of competition must be improved product quality and resource conservation.

The resolution adopted by the CPSU Central Committee and the USSR Council of Ministers on the radical improvement in the utilization of raw materials, fuel-energy and other material resources in 1986-1990 and for the period to the year 2000, as well as the plan for USSR economic and social development for the 12th Five-Year Plan, defined the basic directions for solving problems of resource conservation.

The USSR ministries and departments and the union republic Councils of Ministers are developing sectorial and republic programs on resource conservation ("Ekonomiya" [economy] program). The basis for this program should be measures of a scientific-technical character which provide for no less than 3/4 of the overall economy of material resources specified in the five-year plan. The ultimate goal of resource conservation is to reduce production expenditures and on this basis to accelerate the rate of economic development. The "Ekonomiya" programs in essence should be documents which organize all work on intensification of material resource utilization.

At the present time, certain all-union ministries (USSR Ministry of the Electrical Equipment Industry, USSR Ministry of the Automotive Industry), union republics (Ukrainian SSR, Belorussian SSR, Estonian SSR), as well as a number of oblasts and cities have accumulated definite experience in the development and realization of such programs.

The initial data for developing the "Ekonomiya" program are the tasks ratified for 1986-1990 for the economy of material resources, as well as all-state programs on the realization of vital scientific-technical measures in the field of

energy conservation and increased effectiveness in the utilization of raw goods, materials and recycled resources. The essence of the "Ekonomiya" program is its integrated nature. It must concentrate and coordinate the basic measures necessary for realization of a regimen of resource conservation, provide for their provision with financial and material-technical resources and account for their effectiveness. It must also define the summary data on the volumes of savings of vital types of material resources and overall material expenditures in an absolute expression as well as in percentages, as well as the relative share of satisfying demand through measures included in the program. It will reflect questions of economy of certain types of resources through the application of others, as well as questions of the active use of recycled raw materials, the use of by-products, the improved quality of products and materials; questions of developing new types of materials and expanding the scope of production; questions on the assimilation and introduction of new technology and materials; questions on improving the organization of production and labor, reducing unproductive expenditures and losses of material resources; questions on improving the structure and assortment of manufactured products directed toward reducing the expenditure of material resources, and questions of the utilization of production by-products and recycled material resources.

The indicated measures extend to all directions of material resource consumption: primary production, supplementary needs, repair-operational needs, capital construction, and production reserves. Deadlines should be established for implementing the measures included in the programs, specific executors should be specified, and measures should be provided for improving the planning and economic stimulation of resource conservation.

The "Ekonomiya" program will facilitate the improvement of organization of work on resource conservation at all levels of administration and economic management. In the forthcoming period the system of resource conservation management will be placed on a unified basis. The State Plan for the country's economic and social development provides for a special section entitled "Increasing the Effectiveness of Application and Intensifying the Conditions for Economy of Raw Material, Fuel-Energy and Other Material Resources", effective in 1987.

The section will include:

consolidated indicators on the effectiveness of resource application in the form of tasks for reducing the expenditure of raw goods, materials, fuel and energy per unit of finished (commodity) production, in conjunction with the tasks for reducing production cost;

indicators on reduction of energy consumption and metal consumption of the national income, specific expenditure of metal, pipes, lumber materials and cement in capital construction; expenditure norms for vital types of material resources, as for example fuel for the production of one kilowatt-hour of electrical energy, for one ton of cast iron and steel, or the expenditure of steel for the production of sheet metal stock; the portion of coverage of the demand for material and fuel-energy resources which are in particularly short supply within the scope of the country through their economy; and tasks on replacing light petroleum products used as boiler fuel or as motor fuel with compressed and rarified gas;



tasks on utilizing material raw goods and increasing the output of finished products in the light and food industry, as well as on reducing waste and losses; measures of an intersectorial character directed at resource conservation and their material-technical provision, and measures on reduction of expenditure norms for individual types of resources, etc.

Part of the given indicators will bear a computed-analytical character and will be used for a description of the measures on resource conservation adopted in the plan, as well as in formulating material balances, limits and funds for material resources; others bear a plan-directive character with forwarding to the ministries, associations and enterprises. For example, some of the currently established tasks on the average reduction of expenditure norms for specific types of material resources (metals in machine building), as well as individual indicators (metal use coefficients) must be carried over to the accounting segment. They are not ratified directly in the plan, but are used in plan computations for figuring balances and plans of resource distribution. This will significantly reduce the set of indicators on economy and will increase the independence and responsibility of the ministries and enterprises in selecting the best means of achieving effectiveness in resource utilization.

The realization of tasks specified in the plan for increasing the effectiveness of application and the economy of material resources requires a reorganization in the operation of all segments of management. In connection with this, the ministries and departments, as well as the associations, enterprises and organizations must ensure the best coordination of work on economy of resources and must clearly define the duties and responsibilities of specific services and subdivisions in work on resource conservation. The USSR Gosplan, working in conjunction with other central economic organs, is preparing appropriate methodological directives, on the basis of which the ministries and union republics develop their normative documents. The management of previously created sectorial commissions on the economy and rational application of material resources is placed upon the ministers and heads of departments, while the management of kray and oblast interdepartmental commissions is assigned to Soviet of People's Deputies executive committee chairmen.

Technical standardization of material resources also requires further development. In many types of production their expenditure standards are outdated and not only do not reflect a progressive level in resource application, but often do not correspond to the effective technical documentation and production technology.

The expenditure norms ratified by enterprises and ministries for the regular plan year in many cases do not correspond to the levels of expenditure achieved previously. Often the norms include nonproductive expenditures of raw goods, materials, fuel and energy which are not specified by the technology. The demand for metal, lumber and other materials determined according to such standards exceeds the country's resource capacities by 10-20 percent.

A significant direction in resource conservation and plan balance is the review of expenditure norms for material resources in production and construction. The norms must be brought into correspondence with the technical documentation and the achieved resource expenditure indicators, and expenses not specified by the technology must be excluded from them.

The efficiency of work on the economy of raw goods, materials, fuel and energy greatly depends on the organization of material incentives and moral encouragement of the workers. The enterprises have been given independence in determining the nomenclature of the resources for whose conservation premiums are paid. Up to 50 percent or more of the cost of conserved resources may go toward the payment of premiums, and the amounts of premiums paid to a single worker are not limited. The important changes in the effective statutes on payment of premiums are that premium payments for resource conservation should be made on the basis of face value accounts of resource economy depending on the contribution of specific workers. Special premiums and rewards are introduced for the most outstanding labor collectives and for individual workers, and the USSR State Prize and prizes awarded by the USSR Council of Ministers may be awarded for outstanding results in this field. Based on an evaluation of the results of socialist competition, the ministries and departments, in conjunction with the AUCCTU, are charged with monitoring the reduction in material- and energy consumption of production, ensuring growth in product production primarily through saving resources, involving secondary resources, and accelerating the turnover rate of working capital.

As we have already noted, the effectiveness of utilization of material resources in the national economy must be evaluated not only by the reduction of their expenditure for the production of products and work, but also by the relative reduction in reserves of commodity-material goods per unit of gross social product or national income.

The increased rate of growth in reserves of commodity-material goods as compared with the rates of growth of the gross national product is evidence of serious shortcomings in the management mechanism of controlling the economy and organizing social production. Since the result of the leading growth of combined reserves in commodity-material goods which has occurred in the recent five-year plans was the diversion of tens of billions of rubles away from the national economic turnover and the noticeable reduction in the effectiveness of social production, the need has arisen for creating a system of economic regulation of reserves.

The primary capacities of resource conservation are contained in the application of achievements in scientific-technical progress. It is specifically for this purpose that the development, assimilation and introduction of new engineering and technology in 1986-2000 is envisioned. This technology would make it possible to significantly reduce the expenditures of raw material, fuel-energy and other material resources.

In 1986-1990, 15 million kilovars of outdated types of power equipment will be replaced with current models. Power units with a total capacity of 25 million kW will be modernized, with an increase in their efficiency. The utilization of central heating capacities will be improved, which will provide a decrease in the expenditure of boiler-furnace fuel by 10 million specific units of fuel.

Increasing the production of bimetals is one of the significant directions in economy and increased effectiveness of application of nonferrous metals in the national economy, since bimetals successfully combine the best properties of the base and the coating, and the ratio and designation of layers of these bimetals

may be most varied. In various types of rolled stock made of bimetals (steel-copper, steel-brass, steel-bronze and bimetals of other compositions), the composition of nonferrous metals which are in acutely short supply may be reduced from 95-80 to 70-50 percent, which ensures the possibility of obtaining their greater economy.

With the introduction of wear resistant bimetals, the economy of rolled stock which is in short supply, including nickel and chrome, will comprise tens of thousands of tons in a five-year plan.

We must note that development of the structure of social production and manufactured products plays a great role in resource conservation. The leading development of machine building has been called upon to provide for the technical retooling of all sectors of the national economy. An especially high national economic effect in the sphere of increasing the productivity of social labor and the effectiveness of application of material-technical resources may be obtained through the widespread application of control-measurement instruments, means of automatic regulation of technological processes, and computer technology. The planned and balanced resolution of the indicated questions is very important for the development of leading sectors of the national economy and industry. Increasing the output of economical and progressive types of metal products in ferrous metallurgy in the current five-year plan will make it possible to reduce the expenditure of ferrous metal rolled stock by 2.5-3 million tons.

Within the complex of sectors producing structural materials, an important role is given to the chemical industry, whose products make it possible to liberate traditional types [of structural materials]. In 1970-1985 the volumes of production of new types of structural materials tripled, but their relative share in the overall volume of structural material production is still insignificant and comprises only 0.85 percent. The possibilities for economy of materials for which there is an acute shortage, particularly ferrous and nonferrous metals, through the application of chemical products are vast. In 1986-1990 and in subsequent years, the further increase in capacities for the production of chemical structural materials is envisioned with the application of casing-head and natural gases as raw materials.

Extensive measures have been outlined in machine building which are directed at increasing the effectiveness of metal application. The task has been set of reducing the specific metal consumption of machines by 12-18 percent during the five-year plan, and reducing industrial waste by 30-35 percent. The USSR ministries and departments have been charged with setting tasks for planning, design and technological organizations on reducing the material- and energy consumption of newly developed products and technological processes. In order for the newly assimilated products to correspond to the requirements of resource conservation, new products may not be developed and put into production if they do not surpass the best domestic and foreign analogs by their specific material- and energy consumption. Special requirements for reducing material- and energy consumption will be considered in ratifying new and in reviewing existing standards and technical directives, project planning and other standard-technical documentation.

Significant capacities for economy may be brought into action due to the reduction of material expenditure of resources for repair-operational needs. We know that over 7 million tons of ferrous metal rolled stock (without counting the manufacture of spare parts), over 40 million m<sup>3</sup> of lumber materials, 7 million tons of cement, 4 million tons of oil bitumen, and a large amount of other material and fuel-energy resources are expended for the maintenance and repair of the existing production potential.

At the present time, expenditures for the maintenance and repair of fixed capital have reached huge proportions and have become comparable with the overall volume of capital investments in the country. Maintaining the created production potential in good working order and at the corresponding technical level requires significant labor, material and financial resources, taking them away from the sphere of production and capital construction.

A significant reduction in expenditures for the repair of fixed capital is envisioned through a radical improvement in product quality, acceleration of the rates of renovation and replacement of outdated types of equipment, increasing the role of technical retooling and reconstruction which are becoming an important form of the reproductive process and at the same time make it possible to reduce expenditures for performing capital and routine repairs, and improving the technology and organization of repair work. In the 12th Five-Year Plan the expenditures for repair of all types of equipment (per unit of fixed capital) will be reduced by 15-20 percent.

Resource conservation measures will be widely implemented in all forms of transport, primarily measures on economy and reduction of fuel-energy resources, and the manufacture of economical engines, especially on the most energy consumptive forms of transport--air and automotive. The development of new and highly effective flight apparatus, automobiles and buses with diesel engines is envisioned, as well as more economical gasoline engines and the implementation of other measures. To save on liquid fuel, the automotive pool will be changed over from gasoline to gaseous fuel.

A significant economy of material resources in automotive transport must be achieved through the continued dieselization of the automotive pool, which will make it possible to save up to 30 percent on fuel.

The broader introduction of container and pallet cargo transport will also facilitate a reduction in material and labor resources.

Construction is one of the most material consumptive sectors of the national economy, consuming around 12 percent of the products in the sphere of material production by cost and 35 by tonnage.

With the huge scope of construction, questions of overall economy of material resources and their thrifty and rational application take on great national economic significance. Today every percent of economy on materials comprises (computed per year): for metal rolled stock--178,000 tons; for cement--900,000 tons; for lumber materials--400,000 m<sup>3</sup>; for glass--0.95 million m<sup>2</sup>; for concrete and prefabricated reinforced concrete--1,050,000 m<sup>3</sup>, for brick--227 million pieces, and for commercial concrete--705,000 m<sup>3</sup>.

In the last 10 years the expenditure of metal and cement computed per 1 million rubles of construction-installation work has been reduced by 18 and 15 percent, respectively. However, on the whole the state of affairs with application of resources in construction remains unsatisfactory.

According to USSR Gosstroy data, in the national economy the annual over-expenditure of cement comprises approximately 16 million tons, or about 12 percent of the overall production volume. Direct losses alone which are sustained during transport in non-specialized transport means or resulting from frequent handling and storage in buildings poorly equipped for this purpose are evaluated in the amount of around 4.5 million tons. A significant over-expenditure of cement is allowed due to the application of poor quality fillers in concrete. The total losses at all stages of production and application of glass comprise around 30 million m<sup>2</sup>, or over 10 percent of the annual output volume.

The slow rates of chemization inhibit the increased effectiveness of construction. The chemical and petrochemical industries do not provide for the needs of construction in synthetic resins, plastics and other polymer materials.

To reduce the losses and irrational, uneconomical expenditure of construction materials, measures will be implemented in 1986-1990 which will be directed toward: increasing the effectiveness of material resource application in construction; sharply reducing direct losses during their production, transport, storage and application, and generally using various intensifiers, effective substitutes, and chemical and petrochemical products and goods.

The continued growth in the output of progressive industrial structural materials (asbestos cement extrusion panels, high-strength thermoinsulating mineral slabs, gypsum-cardboard sheets, foam-base thermoinsulating polyvinylchloride linoleum, glass ruberoid, foil ruberoid, and others) has been outlined for the 12th Five-Year Plan. This will make it possible to reduce material consumption and labor expenditures in capital construction and to significantly reduce the expenditure of materials which are in acutely short supply.

A significant economy of cement in capital construction is to be obtained through: using ash from heat and power plants and various plasticizers in the production of concrete and reinforced concrete products and expanding the application of local binding materials, granulated metallurgical and electro-thermal phosphorus slags in construction.

The implementation of the indicated measures and others will conserve around 10 million tons of cement in capital construction and will make it possible to reduce the expenditure of building glass by about 10 million m<sup>2</sup> per year.

Great reserves for the economy of resources are found in reducing the amount of unfinished production, whose volume in the mid-80's reached over 118.4 billion rubles. This took out of circulation over 5 million tons of ferrous metal rolled stock, 12 million m<sup>3</sup> of lumber, and 24 million tons of cement. Also, unfinished construction accounts for 23 billion rubles worth of material goods above the norm, including 2.8 million tons of metal rolled stock, 13 million tons of cement, and 7 million m<sup>3</sup> of lumber. At the same time, if we apply



Belorussia's experience in capital construction in full measure, already in this five-year plan we could liberate around 50 billion rubles of capital investments and place into circulation large volumes of metal, lumber, cement and other types of material resources.

A necessary condition in ensuring economy of materials in construction is a cardinal improvement in planning. The high quality, progressiveness and effectiveness of project planning decisions determine the technical and economic level of the developed production capacities, as well as the quality of their manufactured products and the construction cost of the facilities. At the present time, there is an ongoing overall review of projects, many of which are outdated and do not correspond to the attained scientific-technical level. Tasks have been set for 1986-1990 on the economy of material resources in capital construction at the stage of planning facilities for customer ministries. These should provide for a large portion of the resource conservation effect. As compared with the last five-year plan, the tasks on economy of primary materials in construction have been more than doubled in the current five-year plan for ferrous metal rolled stock, cement and lumber materials.

The five-year plan sets extensive tasks for increasing the application of secondary resources in the period 1986-1990. A list of USSR ministries and departments, scientific-research, design and technological organizations responsible for developing measures on the application of specific types of secondary resources has been compiled. The tasks on putting these materials into circulation will be considered in plan allocations for primary raw goods and materials. Without the widespread application of secondary resources, intensification of the economy is impossible.

The application of secondary material resources may be significantly expanded. Today only 76 percent of the paper pulp, 52 percent of secondary textile materials, 20-21 percent of the phosphogypsum, 10-12 percent of the secondary polymer raw material, 24 percent of the used tires, 64 percent of the broken glass, 90 percent of the furnace slag, 70 percent of the pyrite cinders, 73 percent of the wood by-products, 39 percent of the lignin, 12 percent of the ash and ash-slag by-products of heat and power plants, and around 40 percent of the slag from steel smelting production is used.

Involving by-products in production is not only an economic problem, but also an important moral and ecological one. The resolution of these questions has been reflected in the Basic Directions for USSR Economic and Social Development for 1986-1990 and for the Period to the Year 2000. A State Target Integrated Program for the Application of Vital Types of Secondary Raw Materials in the National Economy in 1986-1990 and for the Period to the Year 2000 has been developed and approved.<sup>3</sup> The application of vital types of secondary resources (without counting metal scrap and ferrous and nonferrous metal by-products) as provided in the outline of the 12th Five-Year Plan will make it possible to liberate an additional 1.7 billion rubles worth of primary raw materials in 1990 as compared with 1985.

The fulfillment of tasks in the sphere of resource conservation will make it possible to achieve significant results.



In 1990 as compared with 1985, the energy consumption of the national income is to be reduced by 8.5 percent, and the metal consumption--by 14 percent. An economy of over 20 million tons of ferrous metals will be realized, 10 million m<sup>3</sup> of lumber materials, 12 million tons of cement, around 231 million tons of fuel-energy resources (with consideration for replacement of organic fuel), 360,000 tons of soda products, and over 1 million tons of sulphuric acid.

The fulfillment of the tasks on economy outlined for the new five-year plan will make it possible to provide for practically 100 percent of the growth in needs of capital construction for ferrous metal rolled stock and lumber materials, 80 percent of the cement, 85-90 percent of the ferrous metal rolled stock for machine building, and 70 percent of the national economy's needs for primary fuel-energy resources.

The goal-oriented and well-coordinated work on increasing the effectiveness of application of raw goods, materials, fuel and energy which is being performed at the enterprises and ministries, and at the national economic level as a whole, will make it possible to successfully solve the problem of intensive application of the created production potential which was presented by our party's 27th Congress.

#### FOOTNOTES

1. PLANOVOYE KHOZYAYSTVO, 1986, No 6, p 81.
2. "Materials of the Plenum of the CPSU Central Committee", 16 June 1986, Moscow, Politizdat, 1986, p 29.
3. PLANOVOYE KHOZYAYSTVO, 1986, No 10, p 3-9.

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## PAPER INTERVIEWS TULA OBLAST AGROPROM CHAIRMAN

Moscow IZVESTIYA in Russian 12 Apr 87 p 3

[Interview with Vasiliy Aleksandrovich Starodubtsev, Director of the Novomoskovskoye Agro-Industrial Association, Chairman of Kolkhoz imeni Lenin, Hero of Socialist Labor and candidate of agricultural sciences by Arnold Pushkar, IZVESTIYA reporter, village of Spasskoye, Tula Oblast: "Awakening Interest"]

[Text] The day before yesterday, 11 April, millions of television viewers of the program VREMYA were witness to the birth of the Novomoskovskoye Agro-Industrial Association in Tula Oblast. The decision to create the association was made at a meeting of authorized representatives of the collectives of nine kolkhozes, four sovkhoses, a poultry factory, a meat and dairy combine, a candy and sowing factory in Novomoskovskiy Rayon, company stores, and village building and transportation organizations which have joined the association. A council and administration were elected. V. Starodubtsev was elected to be the association's chairman.

In the country there are already dozens of agro-industrial associations of the "Kuban" type. IZVESTIYA has written about these. Will the Novomoskovskoye Association differ from this type and if so, how? Our reporter, Arnold Pushkar, has asked the director of the association, Vasiliy Aleksandrovich Starodubtsev, Chairman of Kolkhoz imeni Lenin, Hero of Socialist Labor and candidate of agricultural sciences, to speak about this.

[Starodubtsev] The idea of integrating production, processing and the sale of agricultural products has been around for a long time. Actually this process has been indivisible from time immemorial. Not only did the peasant raise flax, he also prepared the treated stock and plant fibers, did weaving work and pressed oil. Even today the western farmer processes everything he grows in cooperative enterprises and he divides the profits from the sale of finished products. In our country there has been a separation of natural ties. Departments were created that to some degree existed at the expense of agriculture and of the peasant's labor. They were profitable whereas kolkhozes and sovkhoses sometimes could not even reimburse their expenditures. The creation of the RAPO [Rayon Agro-Industrial Association] did not halt this process. The matter sometimes reached the level of the absurd--we produce millions of tons of potatoes but cannot harvest and store them properly.

During the past fall in Tula Oblast alone many thousands of tons of apples perished in the snow. In quantity of sheep our country occupies second place in the world. But fewer and fewer leather jackets and short sheepskin coats are being sold. There is just one reason for this--the separation of the interests of the producer, the procurer and the processor. No system except ours could withstand this type of violation of mutual economic ties, of production coordination and of deafness to the needs of the consumer. But this is just the first premise.

If we compare ourselves to the Kuban and other other agro-industrial associations, we can say that we went further in the areas of democratization and self-management. In essence the Novomoskovskoye is a cooperative-state association that in many ways embodies the ideas found in Lenin's cooperative plan.

We begin with the fact that here management will be carried out with the extensive participation of kolkhoz farmers and workers in solving production, social and cadres problems. All positions, ranging from brigade leader to administrative chairman, are elective. In announcing competition to fill vacancies we expect to find conscientious people. The highest organ will be a meeting of authorized kolkhozes and sovkhoses, enterprises and organizations which belong to the association. It elects the administration and its chairman from among the directors of enterprises and also creates a small apparatus which will include some RAPO workers. The existence of the RAPO loses its significance under our conditions. The democratic principle of management extends to all state enterprises and organizations which join the association and which will be managed by means of general meetings and of enterprise councils headed by chairmen, both of which are elected.

The association is envisioned as a production-economic complex based totally on cost-accounting [khozraschet], self-financing and self-support [samookupayemost], with extensive rights in producing, processing and selling products and in creating scientific subdivisions.

By making deliveries into the union and republic funds the association has also received the right to sell 30 percent of the planned and all of the above-plan products at established prices. This will enable us to better supply the Novomoskovsk industrial region, in which about 200,000 people work, with vegetables, fruit, and meat and dairy products. Another goal of our experiment is to transfer the experience of Kolkhoz imeni Lenin, with its high level of intensification and labor productivity, to all enterprises so that every one of 50,000 hectares of our lands and every big and small farm will work intensively.

Here we will give special attention to dairy farming and breeding at the contemporary level. On the farms of Kolkhoz imeni Lenin the calves that were produced using the method of embryo transplants from cows characterized by their high milk yields are already growing up. We are cooperating with the Canadian firm, Western Breeders International Ltd., in this same direction. I have on my table the technical program for clarifying the conditions for creating a joint enterprise to raise Holstein breeding stock. The firm supplies us with embryos and some equipment.

[Question] This year you have established contact with the great-grandson of L. N. Tolstoy, Luidzhi Albertini?

[Answer] Yes, this year as part of a delegation from gosagroprom [State Agro-Industrial association] I visited Italy and became acquainted with the Albertini farm, where milk yield surpasses 10,000 kilograms per cow. Recently Albertini visited our country, and our kolkhoz as well. We discussed conducting joint experiments on increasing the productivity of the dairy herd by optimizing feeding and by utilizing the computer.

In any case our association will carry out persistent work to increase milk yield on the basis of the experience of Kolkhoz imeni Lenin, where during the past year each of 1,100 cows produced 5,638 kilograms of milk with a butterfat content of 3.8 percent (Albertini has 250 cows, butterfat content is 3 percent). Of course, we cannot acquiesce to the fact that average milk yield per cow is 2,600 kilograms in the country, or less by a factor of 2.6 than in developed countries. Can we go peacefully along knowing that 10.7 million cows in the USA supply the same amount of milk as our 22 million? One of the most important economic goals of our cooperative is to reach the world level in livestock raising.

[Question] As far as I know, your association has been allowed to create funds for wages and for economic stimulation according to long-term norms using net income. What does this mean in practice?

[Answer] During the last 10 years, thanks to the efforts of Minfin [Ministry of Finance], Goskomsen [State Committee for Prices], Goskomtrud [State Committee for Labor and Social Problems], USSR Gosbank and other departments, which brought forth entire stacks of instructions, we are building our economy to a large extent not according to the quality and quantity of labor, as we should, but according to the size of established wages. It is a paradox that the specialists of Rassvet Enterprise, which joined our kolkhoz the year before last with its paltry harvests and weight gains, received more in wages than our workers, who were very productive. It is absurd that whereas in our kolkhoz 32 percent of gross income is used for wages, in the "recumbent" Novomoskovskiy Sovkhoz, which today joined our cooperative, 95 percent of gross income is used for this purpose. But this does not concern anyone. If the average wage in your enterprise is 120 rubles all supervisors are overjoyed, but the fact that workers are working unproductively worries no one. But if workers' wages are increased all supervisors raise a fuss. The numerous instructions with which they are armed are directed at not allowing an individual to earn his money through honest labor. For decades it did not occur to anyone in Minfin, Gosbank and other departments which dealt with wages to try to understand what workers did for "a lot of money" and what they did for "normal" wages.

I think that herein lies the root of all of our errors and failures in economics--as long as an individual can live without worries, working any which way, there will be no movement forward. Today the idler is a danger, like the recidivist. It sometimes seems to me that it is more advantageous for society to pay him assistance rather than money he has not earned.

The first thing we intend to do in our cooperative is to break this vicious circle. Highly productive creative labor will be reimbursed most abundantly. We ourselves, through our election organs, will determine the wages of our specialists and workers depending upon their contribution to production development. It is not impossible that some competent, business-like individuals with initiative will receive double their current wages. This will awaken material and moral interest; we ourselves will investigate staff schedules. Is it wise to have dozens of specialists in every enterprise? Is it necessary to have the farm director, brigade leader and zootechnologist follow a cow around single file?

A whole range of vitally important indexes will determine deductions from gross income. Cost accounting and collective contracts will become the basis for our movement forward. I feel that this will awaken in people their bygone thirst for peasant labor, their feeling of being in charge and that of responsibility for the land.

[Question] Does your experiment touch on the social sphere?

[Answer] Yes, I became convinced long ago from the history of my own kolkhoz that social justice is an economic category and a powerful factor that has a direct effect on the quality and quantity of labor. We began by directing the first earned kopeck into increasing pensions for veterans and for the widows of soldiers. Then as the economy improved we followed a path not of accumulating millions in kolkhoz accounts and money in deposits into the savings accounts of kolkhoz farmers, but of creating consumer funds, of securing a good life for everyone and especially for the weak members of the collective--veterans, children and women. Not a single individual has to remain alone with his problem; each person must be assured of the fact that with conscientious labor he will receive a good wage, an apartment and a pension. We have built housing with all municipal services, a House of Culture, a swimming pool, a sports hall, a children's combine and other social-general service facilities. With growth in income we abolished kindergarten tuition and payment for school meals. We are moving toward free housing. We have begun to pay women who are taking a legal leave of absence 80 rubles a month for 1.5 years and in the future we hope to decrease the working day for the woman. Here women work primarily in the sewing-field crop cultivation shop. The shop's creation gave us, apart from income, the opportunity to completely stop utilizing the help of city dwellers.

Now we are permitted, as an exception, to extend social privileges which our kolkhoz farmers have to other enterprises belonging to our new cooperative. I feel that this will be an important factor in improving their economies.

[Question] Why do you, a practical person, place such an emphasis on democratization, appointment by election and accountability?

[Answer] I felt deeply the extreme necessity for the decisions of the 27th party congress and the January Plenum of the CPSU Central Committee which are directed at democratization and openness [glasnost]. Of my 408 colleagues in 1964, the year I became chairman, only 14 kolkhoz and sovkhoz directors remain

in their positions although there were quite a few excellent managers among them. The problem is not only that we lost them but that in essence we had reverse selection--a practical, independent, thinking individual was replaced by a phrase-monger and spineless, obsequious executor.

[Question] Your speech at the recent Tula Oblast party committee plenum made a deep impression on me as well as on other participants. You spoke about the fact that in bygone days Zharkov, a breeding plant director, was given short shrift because at one of the party conferences he rejected the candidacy of the former first secretary, I. Yunak, for the obkom.

[Answer] Zharkov was one of the strongest and most intelligent directors from our complex at that time and his enterprise was excellent, but soon after that incident he was relieved of his duties. He was not assigned to any other type of work, not even to the position of cattleman, and with the help of individuals who are prospering today that healthy man was literally hunted down. His conscience had not allowed him to remain silent. At some point or another justice must prevail and vices must be identified and punished. As you have seen, obkom members supported me, and a committee was formed to investigate the guilt of some workers who destroyed Zharkov and many others.

[Question] You often have an unkind word for the bureaucrat.

[Answer] In thinking about this I am horrified by the prospect that if our apparatus continues to grow at the current pace in 100 years there will be no workers left--everyone will be a functionary. What is the basis for the growth in the apparatus? Incidentally, it sucks in the best specialists, who quickly lose their taste for production and who direct their energy into paper pushing and the collection of all kinds of reports.

Despite the direct instructions of the party's central committee, locally there continue to be petty surveillance and severe administrative control of enterprises. Dairy herds are still often evaluated not by their productivity but by their size. In order to reject a cow and send it to the meat combine six signatures are required. I won't even try to figure out who needs an index concerning the number of heifers which mate each day. What kinds of closet space, what kind of diligence are needed to collect and process all of this?

The training of kolkhoz and sovkhos specialists is now such that they can manage themselves. I feel that we need only small groups to carry out the policies of technical progress jointly with science. The remainder of the apparatus of agricultural organs, from the RAPO to the Gosagroprom [State Agroindustrial Committee], must be curtailed sharply so that industrious people are returned to the land, where they belong. As for agroprom workers who at various levels are involved in the apportionment of material resources, it has long been time to move from this archaic form of division to the free sale of resources.

Our country produces considerably more tractors than the USA. But is it necessary to artificially inflate the power available per production unit, especially in unprofitable enterprises, at the expense of the state?



Incidentally, in our kolkhoz the power available per production unit is much less than in neighboring weak enterprises or than the average for the rayon and oblast, yet our production is somewhat greater. The acquisition of equipment and other resources using an enterprise's own means will teach village workers to utilize both carefully, and industry will expect better-quality machinery.

[Question] Vasiliy Aleksandrovich, late last year and early this year I came to your kolkhoz more than once wishing to have an in-depth conversation with you, but you were always either in Moscow or speaking into two telephones at once. I saw the kind of whirlwind you were caught up in, how you were torn to pieces among the flow of ongoing and global matters related to restructuring.

[Answer] There is reason for the saying, "In Russia, in order to start anything, you need paper and a press." I have had to pester people, travel to Moscow dozens of times and speak on the telephone hundreds of times in order to settle things on the all-union, republic, oblast and rayon levels. After all, we had to dispute every point of our foundations in USSR Gosplan, Gosagroprom, Minfin, Goskomtrud, Goskomsen, USSR Gosbank and Minyust [Ministry of Justice]. I must say that the apparatus of these departments is not hurrying to applaud our liberties, especially when the topic under discussion is new forms of wage payments and the extension of cooperative democratic principles to state enterprises which have joined the association. I have not been able to defend everything successfully.

[Question] What, for example?

[Answer] Well, let's say inclusion in the cooperative account of the savings of kolkhoz farmers and workers in order to make sure that both the cooperative and the personal ruble are working to the fullest degree and yielding a return, and so that the interest and responsibility of each individual for the common endeavor increase. I think that in time we will achieve this.

[Question] How do you see your cooperative in 25-50 years?

[Answer] In the history of our agriculture there have been many people who have drawn optimistic pictures about rapid abundance. I do not want to imitate them. I am a realist. If only it were 20 years earlier, but now I have only about 10 years left to work. I am sure that during this time, having disseminated the experience of Kolkhoz imeni Lenin to all enterprises, we will achieve world levels as concerns the production of agricultural products. However, I am not sure that we will achieve this in processing too. We have lagged too far behind developed countries. Look at a "trifle" such as the packaging of finished products. Our paints and varnishes are not good enough for us to be able to offer our goods in western markets. What have our scientists and our hundreds of chemical institutes been doing for the last 70 years?

[Text] Here the conversation ended. It was already midnight. I went to Tula full of impressions of Starodubtsev's frenzied and humane nature, his thirst for work, his severe judgements. Tomorrow at 7 o'clock in the morning, like every day, he would once again be drawn into the flow of business life, into the whirlpool of restructuring. Once again he would be arguing, worrying and taking risks in order to enrich the country and to improve the well-being of the individual.

## STATE ACCEPTANCE SYSTEM NEEDED NOW

Moscow IZVESTIYA in Russian 24 Feb 87 p 2

[Article by M. Krushinskiy: "Is a State Acceptance System Needed in Construction, When Full Cost Accounting [khozraschet] Has Not Become a Reality?"; first paragraph is source introduction]

[Text] First, a word about a certain misunderstanding. It has taken hold, as strange as it may seem, even among those involved in construction matters, not to speak about the nonspecialists, that the state acceptance commission, through whose hands any facility passes at the "finish", performs precisely the functions of state acceptance. And if that is the case, there's nothing to discuss: the question raised in the heading loses its meaning.

Alas, we have here a typical example of terminological confusion. The similarity between the aforementioned services ends with the presence in their titles of the word "state." And the difference is fundamental: state acceptance in production is handled by representatives of an "arbitration" department--the USSR State Committee for Standards--who bear no material responsibility for defective work and therefore have no stake whatsoever in covering it up. On the other hand, in construction the acceptance commissions consist, by and large, of people who are dependent on the favorableness of the indices and for this reason are inclined to overlook unfinished work.

Well, put yourself in the position of the deputy chairman of a rayispolkom or gorispolkom. A kindergarten, or a school, or a housing development is being built on your territory: who will be held accountable first of all if the planned deadlines are not met? And for what will you or the chairman of the acceptance commission feel a "heartache" on 31 December, for example: for the quality of the project or for the planned deadline? And practically all the members of the commission are in a similar position. Only the State Fire Inspection Service or the State Sanitary Inspection Service, perhaps, are independent, and their "viewpoint" is a specific one. Granted, there is also a representative of the USSR State Capital Investments Bank. His concern, however, is with whether the amount of work performed corresponds to the funds spent, and by no means with quality per se. The situation is similar in industrial construction, as well.

The article "Self-Monitoring or Self-Deception?" (IZVESTIYA, No. 6, 1987) examined the situation in considerable detail. As the first readers' responses indicate, it aroused many people's concern. "Both the contractor and the client have a single objective--to turn over the facility according to a strictly established deadline," N. Derevyanko, a construction engineer from Donetsk, writes the editors. "The client has no less a stake in turning the facility over than the contractor, especially at the end of the year. It is to the advantage of both of them to complete the construction project as quickly as possible."

But the difference between the acceptance commission and the state acceptance system doesn't end here. The quality controller at a plant is called on to keep track of the manufacture of articles through the entire technological cycle, to suggest to the plant personnel where things are wrong, and to take part in the prevention of potential defective goods. And in construction? Take just an apartment building for the sake of a vivid example. So the commission members have gone through the stages, inspected and checked: the roof seemingly doesn't leak; the doors and windows close, and the faucets are all working, aren't they? And what if the roof starts to leak, the building develops drafts, or doors or windows no longer close properly in a week (or a month, or a year)? Even the most conscientious and skilled specialist is incapable of uncovering any substantial percentage of hidden construction defects in a day or two. Hence, a new question arises: who monitors quality in construction throughout the course of construction?

Analysis indicates that this branch not only lacks a service analogous to the state acceptance system in production. At most construction projects there is not even a service analogous to a plant quality control department.

"In mine construction the mine surveyors are responsible ex officio for quality control. But I cannot recall a case in which inspection following the acceptance of mine construction work by the mine surveyors failed to uncover flagrant deviations from instructions. Quality control in surface construction is supposed to be handled by the client's curator service, and the designers are supposed to carry out designer's supervision. The USSR State Capital Investments Bank is supposed to make control measurements. But not one of the aforementioned organizations is capable of carrying out full-fledged inspection."

The letter is from Comrade Miroshnichenko of Ust-Kamenogorsk, who has 40 years of experience working in the branch and until recently held the position of manager of a construction trust. He knows very well what he is talking about. For many decades the responsibility for the quality of work in construction has been placed on the builders themselves, who for their part failed to concern themselves with setting up a dependable quality-control service. From one five-year period to another what has been demanded of them, first and foremost, is construction volumes and completion on schedule, i.e., quantity. On the other hand, the problems of quality have now built up to the point that they have reached a "critical mass."

A recent survey of readers' letters (IZVESTIYA, No. 45, 1987) cited complaints from new apartment occupants from Voronezh, Samarkand and Chernovtsy Oblast: flagrant examples of defective construction work in apartment buildings. Fortunately, that sort of thing is encountered relatively infrequently. But we've long since gotten used to not paying any attention to various "inconsequential" defects--why bother! Yet they exist at practically any facility that is being opened for occupancy or put into use. If you don't believe it, just check. If, for example, you have a parquet floor in your home, take an ordinary match and stick the end into a crack between the parquet blocks. I'll bet, with practically no risk of losing, that it will slip through! Yet this is already a violation: according to standards, the clearance should not exceed 0.3 mm.

It's a trifle, of course; we'll survive--I'm not calling for the turning over of housing to be held up on account of that sort of defect. But considerably worse defects have, unfortunately, become the rule. According to figures of the USSR State Capital Investments Bank, additional outlays for bringing new apartments up to normal condition amount to an average of four to six rubles per square meter (!) of living space. For the most part it's the new occupants who pay. The situation is no better in capital construction, either. A recent selective survey by the USSR State Statistical Administration showed that the poor quality of construction and installation work is the cause of 21 percent of the losses that the state sustains from the failure to bring new production facilities fully up to rated capacity. So, we curse the production workers, while one-fifth of their fault (even more!) lies on the conscience of the builders, for everything in the economy is interconnected.

But pardon us! we are told. We have the State Construction Inspection Service, and we have agencies of the State Architectural and Construction Control Service (SACC). Where are they looking? I shall answer with a question: can 139 inspectors accomplish a great deal? This is precisely the numerical size of this all-union service today. Last year approximately 1,000 of 320,000 production facilities that were under construction were inspected by personnel of the State Construction Inspection Service--I'll let readers figure out for themselves what percentage that amounts to. And for that, our thanks!--these people spend some 140 days a year traveling on business.

Civil construction is monitored by services of SACC. They have more staff members--about 3,000. Granted, from year to year their number has been reduced--there are not very many people who want to work in a relatively unprestigious job with modest pay. But even if the operations were fully staffed, is it conceivable that countless work operations at countless construction projects could be monitored with that sort of manpower? In contrast to the inspectors who are directly under the USSR State Construction Committee and the union-republic state construction committees, SACC staff members receive their pay from the ispolkoms (city and oblast), which, as already stated, are actually interested not so much in quality as in the volume of construction and installation work. Hence the benefit from such control is, alas, relative.

"The only reliable appraiser of quality is the consumer, who will punish himself if he accepts defective work. But today the situation is such that, in lodging complaints against those who are guilty of defective work, the consumer also punishes himself," writes Yu. Shchipakin from Perm. We must, he continues, set up a construction "arbitration service" in such a way that the losses from poor quality are sustained entirely by those who have done the defective work. Similar ideas are expressed by B. Kesler, a labor veteran from Kiev: "At one time there existed some sort of warranty certificates that required the contract organizations to correct at their own expense defects discovered in the course of a year from the day of occupancy. To all intents and purposes, these certificates became a dead form. It would be a good idea to revive them. So that a year after a facility had been turned over a commission consisting of representatives of the contractor, the client and the consumer (an enterprise's management or the housing operation office, in the case of an apartment building) would check to see whether the warranty certificate conformed to the work that had been done. And only after that would the builders be paid a bonus!"

The law on the state enterprise (or association) whose draft is presently being discussed should set everything straight. Given the existence of "deep" cost accounting, the function of acceptance could be entrusted either to a housing operation office or a building operation board: they would not accept defective work to their own detriment, and no ispolkom would make them. And a contractor "sitting" on cost accounting would be careful about doing defective work--fines that had ceased to be a formality would hit everyone, from plasterer to trust manager, hard in the pocketbook. But this is in the future, when the economic management levers come to rule in our economy finally and completely. The question is whether we should reconcile ourselves to defects at the present stage.

I am not convinced that the experience of the state acceptance of output, which is still not all that rich, should be mechanically transferred from plant shops to construction sites. But intelligent, consistent and unbiased control on the part of a service that represents the state's interests and depends on nothing but those interests is essential. I dare say that something else is clear: who should assume the responsibility for setting up such a service. Technical policy in the branch is dictated by the union republic State Construction Committee--the USSR State Construction Committee. It is the collective "author" of existing sanitary norms and regulations and other standards. Its functions are in many respects analogous to the functions of the USSR State Standards Committee in industrial production: to be the supreme judge, the "tuning fork," of economic and technical "conscience" in that sphere. So it is the one that should exercise oversight to ensure strict adherence to the technical principles it has developed.

When this article was already ready for press, it became known that a planned inspection carried out by the USSR State Committee for Civil Construction and Architecture in the city of Krasnoyarsk disclosed flagrant violations of the procedures for turning apartment buildings over for occupancy. 65,796,000 square meters of housing was disqualified for inclusion in state reports on plan-fulfillment results for 1986.

Nine buildings were involved: according to reports, they had supposedly been turned over for occupancy by New Year's, while in reality the acceptance documents for seven of them had actually been signed at the end of January, i.e., they were obvious cases of report padding. Two other buildings had been turned over with serious amounts of unfinished work: The electric power had not been hooked up, there were no electric ranges in the kitchens, the entryways and porches to the buildings were missing, and in some cases painting, plastering and other finishing work were still in progress.

The contractors were local construction organizations, while the clients were the Krasnoyarsk Industrial Building Structural Combine of the USSR Ministry of Construction in the Urals and Western Siberia, the Ministry of the Communications Equipment Industry, and the capital construction administration of the Krasnoyarsk Gorispolkom. The signatures of the raispolkom deputy chairmen who had headed the acceptance commissions were on both of the fraudulent acceptance documents.

One must suppose that competent agencies will provide a legal judgment of these facts. But how should what happened be judged from an economic standpoint? Without in any way justifying the report-padders, one must nonetheless say that they were prompted to commit their violations precisely by their lack of any real stake in quality, as well as by the existing system that is marked by an absence of quality control. An ispolkom, which should be concerned first of all about the convenience of the city's residents is concerned only with the gross output index! Isn't this the source of both report padding and incompleting work?

Inspections by personnel of the USSR State Committee for Civil Construction and Architecture are capable of covering, at the most, two percent of the housing and social, cultural and consumer-service facilities under construction. So specific violations have been uncovered, but a phenomenon that causes serious economic and moral damage to society remains.

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## RESULTS OF PRICE REGULATION IN BSSR EXPERIMENT APPRAISED

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 3, Mar 87 pp 99-105

[Article by V. Tarasov, chief of the Problems in Price Formation Department, BSSR Academy of Sciences Economics Institute, and B. Gerasimova: "Consumer Goods and Their Realization"]

[Text] Reorganization of economic levers and incentives \*  
Improvement in product quality for goods in light industry  
and satisfaction of consumer demand \* System of prices and  
means of improving it.

The continued reorientation of enterprises toward a radical improvement in product assortment and quality requires a corresponding restructuring of the economic management mechanism and system of economic levers and incentives which would ensure the output of products for the purpose of meeting consumer demand. Definite shifts in this direction have been made in the course of the economic experiment performed at the BSSR Minlegprom [Ministry of Light Industry] in 1984-1985. Under the new conditions, the work of the enterprises on improving product assortment and quality has been noticeably stepped up, the ties with trade have been expanded, and greater consideration has been given to consumer needs.

At the same time, the experiment showed that we have been unable to achieve in proper measure the output of products which fully correspond to consumer demand and to make a decisive shift in the direction of radically improving the assortment and quality of goods. As before, children's and durable inexpensive products for adults have remained "in the background", while there has been a significant growth in the production of goods marked with the index "N" (in 1983 their output comprised 24.6 percent of the overall volume of production for BSSR Minlegprom enterprises; in 1984, 31.5; and in 1985, 35.5 percent).

This situation is explained by the fact that even under the new conditions of economic management the enterprises strived primarily to ensure the fulfillment of volume cost indicators. Therefore, changing the assortment to a more inexpensive one would have been reflected in the results of economic activity of the enterprises. In this connection, the resolution by the CPSU Central Committee and the USSR Council of Ministers entitled "On Improving Planning and Economic Stimulation and Developing Management of Consumer Goods Production in Light Industry" gave primary attention to turning contract agreements into a real basis for plans and, consequently, for evaluating the activity of light industry enterprises.

Under these conditions, price formation takes on increased importance, since the price has become one of the most important instruments in improving the product assortment and quality and in balancing the volumes of production and consumption. At the same time, prices must also help in compensating for economically justified expenditures for product production and in implementing a cost (monetary) evaluation of the results of work of industrial associations (enterprises).

A special place in achieving balance belongs to retail prices, which must ensure the timely sale of products, and consequently the influx of funds into the state budget. They are an active tool in social policy and have a significant effect on the balance of supply and demand.

Retail prices for goods in light industry are a component element of the price system. With their direct participation, over a quarter of all the turnover tax goes into the state budget, which provides for covering state subsidies for the production of a number of food products of primary necessity.

The overall level of retail prices for products in light industry has a direct relation to prices on other types of goods going for personal consumption.

The system of prices which has developed in the sector includes permanent, temporary (on improved quality goods) and contractual prices (for especially up-to-date products).

However, this system is still not fully oriented toward the intensive type of reproduction. The increased (temporary and contractual) prices often give only a quantitative growth of production and do not always ensure the output of high quality goods. In this case, there is a disruption in the unity of consumer cost and commodity cost, an increased dynamics in the growth of prices as compared with the dynamics of consumer cost of the products.

The qualitative growth of goods intensifies the differentiation of solvent demand. This leads to the situation whereby its satisfaction must be ensured by the production of goods with different levels of quality within the limits of social demand. We are speaking here of the broad differentiation of assortment and quality of production. Here the total set of consumer properties of consumer goods as a form of expression of their quality may be reduced to natural-material and aesthetic, associated with the social aspect of consumer cost. However, such a division of consumer properties of products is to a certain degree conditional. The quality of goods in light industry is determined by a set of consumer properties, and its correspondence to demand may be ensured only through the unity of the natural-material and social aspects of consumer cost. Therefore, the optimization of quality depends on the orientation of products toward a level of aesthetic and natural-material properties of the goods, equally satisfying both of these demands. And it is necessary that each level of consumer properties of goods provide for satisfaction of demand to the maximal degree possible.

For the purpose of a substantiated differentiation in prices, products in light industry may be divided into goods for mass consumption and products with especially high consumer properties, primarily aesthetic. In turn, products for mass consumption may be related to goods with a base (normal) level

of quality and to products with increased quality as compared with the base level. In this case, the increased level of quality must occur also generally due to the growth of the aesthetic consumer properties of the goods.

In this connection, in our opinion, fixed prices should be established for base quality level goods for mass consumption. For products of mass consumption having an increased level of consumer qualities it is expedient to establish temporary prices. However, contract prices may be set for goods having an especially high level of consumer properties which are not intended for mass consumption. This ensures the differentiation of prices for similar goods which differ in their level of quality and which meet the needs of various consumer groups.

Creating an interest on the part of the producer for increasing product quality and improving the assortment must be based on the application of additional profits formed as a result of the deviation of the individual standard cost of the goods from its social cost (due to the higher level of consumer cost of the goods as compared with the base level). At the present time this is ensured generally by setting temporary prices for improved quality goods with the index "N".

Temporary prices facilitate the growth of overall cost indicators of an enterprise's activity. At the expense of the additional profit realized from the sale of the products at these prices, the material incentive fund increases, and consequently also the wage fund. Thus, deductions from mark-ups to temporary prices are reflected in the material interests of the manufacturers.

At the present time, mark-ups to prices on improved quality goods have a large relative share in the material incentive funds of BSSR Minlegprom enterprises. (They surpass by tens of times the deductions for fulfilling contract agreements and for growth in profits), and influence the formation of the amount of balance profit. A considerable sum of mark-ups to the fixed retail price (40 percent) is included in the wholesale price for a product of improved quality for compensation of additional expenditures and formation of profit. This sum also enters into the balance profit of the enterprises, since practically all expenditures for improving the product's quality are considered in its fixed wholesale price. In this case, the mark-up performs a stimulating function and represents a significant value of additional profit.

The stimulating role of mark-ups included in the structure of temporary retail prices on products with the index "N" is determined by the fact that the material expenditures (they comprise the prevailing portion of the production cost for goods in light industry), as a rule do not have direct relation to product quality. In a number of cases the manufacture of products with higher aesthetic consumer qualities is even accompanied by a reduction in material expenditures. Therefore, there is no direct connection here between the level of material expenditures and the price mark-up. At the same time, mark-ups may stimulate a reduction in additional expenditures necessary for improving production with the index "N" determined in certain measure by the fact that their lower level as compared with plan or standard expenditures increases accordingly the portion of mark-ups included in the balance profit. At the same time, 40 percent of the mark-ups deducted to balance profit and 15 percent of those included in the material incentive fund have an identical economic nature. There-

fore, excluding from commodity production the part of mark-ups deducted into the material incentive fund is to a certain degree conditional. In this case, there is double stimulation, since that part of the mark-ups which gets into the balance profit is distributed in general order, while a certain portion of it again appears in the material incentive fund.

Under conditions of changeover of the BSSR Minlegprom enterprises to self-financing as of January 1987, 15 percent of the mark-ups to prices will be included in the gross income of the enterprises and distributed in general order. This will include also part of the mark-up (40 percent of the fixed retail price) remaining after deduction into the budget. Thus, deductions from mark-ups remaining at the disposal of the enterprises will have a direct effect on the wage fund.

In this connection, the redistribution of part of the additional profit in favor of associated enterprises and manufacturers of children's product assortments should most expediently be implemented at the expense of the "free" portion of the additional profit, and not at the expense of deductions from mark-ups for payment of premiums. Such redistribution is determined by the need for considering the social priorities and by the fact that the problem of stimulating the output of children's products cannot be solved by price methods alone, and specifically by setting higher prices for them. However, since improved quality products with the index "N" must serve to meet demands of a higher level as compared with the base, in this case it is expedient to justifiably redistribute part of the additional profits in favor of the manufacturers of products of high social significance.

At the present time, practically every tenth product with the index "N" is underpriced. Premiums for manufacture are received, but the goods may not even be realized, i.e., the monetary sums paid out do not correspond to the actually realized end consumer of the product. In this case, mark-downs on products are compensated not by the manufacturing enterprises, but from the state budget funds. It turns out that, having bought one commodity at the temporary price, the consumer at the same time pays for the low quality of another. Moreover, the mark-up to the price on improved quality goods is increased by another 2 percent for a seasonal sale, which has no relation to the quality of products with the index "N". We believe that the development of means for marking down improved quality goods is a necessary measure. However, it should be implemented not at the expense of the consumer, but rather from the funds remaining from the mark-ups to prices at the enterprise. In this case, the producer will himself bear the responsibility for the sale of his product. Thus, part of the additional profit obtained by an enterprise from the sale of products at temporary prices, as well as at contract prices, may be redistributed according to the following basic directions: in the reserve fund for compensating losses in case of mark-down; in favor of the manufacturers of products which meet social-priority demands and satisfy associated enterprises. Part of the mark-up which remains at the enterprise must be tied in with the level of created consumer cost and labor expenditures of enterprises and for their manufacture. Now, however, the degree of material incentive depends largely on the level of the fixed retail price.

The existing system of prices (fixed, temporary and contractual) for goods in light industry is called upon to ensure the unity of formation of all types of prices, a clear interconnection between them, and on this basis a uni-directionality in action of all the systems. At the same time, every type of price must occupy its own specific place in this system and be set for functionally uniform products depending on the level of consumer properties.

In this connection, fixed, temporary and contractual prices may be viewed as prices corresponding to three levels (stages) of product quality. The first (base) level must correspond to a fixed price, the second--to a temporary price, and finally the highest level of consumer properties of the product--the contractual price for products which are especially up to date.

The main role of fixed prices consists of forming the base level, the framework for the entire system of prices on products in light industry. Therefore, these prices must be formed on the basis of standard (progressive) expenditures with consideration of the base (normal) quality.<sup>1</sup> K. Marx wrote that "the cost of any commodity is determined by that work time which is required for the production of normal quality goods."<sup>2</sup> Therefore, the formulation of fixed prices on the basis of normative expenditures indicates their rapprochement with the social cost of the product of labor having a base level of quality. This ensures the unity of consumer cost and the cost of goods, having a specific quality level.

However, the unity of consumer cost and commodity cost may be achieved if a higher or lower level of product quality as compared with the base level finds its reflection in prices due to mark-ups (with higher consumer properties of the goods) and markdowns (in the case of loss of part of the consumer cost). Therefore, temporary and contractual prices must be viewed as component elements of a system of prices on goods in light industry, while the newness of goods, on the basis of which an increased price may be set, must be considered in the new level of consumer properties and higher quality of the product.

At the present time, in evaluating the quality of products with the index "N", the scale method is used, since the aesthetic properties of products cannot be compared in any other way. However, this method requires further development, since it has a number of shortcomings. Among these we may cite: the unsubstantiated marking of the index "N" for goods whose quality does not correspond to consumer requirements; the increase in products offered at temporary prices, leading not to bringing the structure of supply and demand closer together, but to driving them farther apart; the ease of granting goods the status of "improved quality" and the absence of an integrated approach to evaluating the quality of such products. Therefore, the Integrated Program for Developing the Production of Consumer Goods and the Sphere of Services for 1986-2000 notes that the primary task in this area is the radical improvement in the assortment and quality of goods.

The possibility of obtaining the status of "improved quality goods" is associated with the fact that, first of all, the sum of points which must be earned in accordance with the effective Methodological Directives for Differentiation of Temporary Prices (1983) is insignificant (equal to three). Secondly, there are many newness indicators (possible improvements in consumer qualities. For example, for footwear there are 11, and for tricot goods 9.) As a result, almost



every new product can be classed among improved quality goods. And it is no accident that footwear, for example, has the highest relative share of these goods, while it is specifically footwear which is the cause for the greatest consumer criticism.

Under conditions of changeover of the BSSR Minlegprom enterprises to operation according to the surplus income method, they have an increasing interest in producing not simply high profitability products, but also goods whose price contains additional profit (mark-up). At the same time, they will receive their earned material reward only if the product quality corresponds to the consumer demands and differs in significant measure for products on which fixed prices are established. The development of temporary prices is directed at increasing their level of justification and overcoming the output (at increased prices) of products of ordinary, base quality. More of all, they are directed at increasing the requirements for the quality of improved quality products.

Cases are frequent where a product having one or two improved consumer qualities is awarded the Seal of Quality. However, the consumer is interested in the product as a whole. Therefore, it is necessary to have an optimal combination of natural-material and aesthetic properties.

We have developed a new system of point evaluation of quality for products in light industry. If we divide the indicators of consumer goods quality into three groups, giving an evaluation of quality in the sum of 50 points, then those which are associated with correspondence of the goods to the demands of fashion will comprise the first group for comprehensive evaluation of the aesthetic consumer properties of the product. The second group unites consumer qualities which reflect the functional purpose of the product, determined by its natural-materialistic qualities. And, finally, for purposes of orientation of the assortment and quality of consumer goods toward satisfying the demand of specific categories of consumers, it is expedient to give an evaluation of each new product from the standpoint of its correspondence to the demands of that category of consumers for which it is intended. Based on the proposed point scale, a comprehensive evaluation of the aesthetic consumer qualities of goods comprises 27 points, functional--20, and correspondence of the goods to the demand of a specific consumer category--3 points.

In the point method of evaluation the transition from one level (degree) of product quality to another must be accompanied by a higher total of points. For example, a fixed price is one sum of points. If the product receives a large point total, it may be awarded the status of "improved quality goods". It must have the lower and upper limits of temporary price in order to ensure their differentiation with different level of consumer qualities. With a total number of points exceeding the upper limit and making it possible to set a temporary price for the product, a contractual price should be set as for a high fashion product which must also have a lower and an upper point limit. Thus, unity is achieved between consumer cost and the cost of the goods.

In this connection we may propose the following differentiation in points for obtaining the status of "improved quality goods" and "goods with an especially high level of consumer qualities" (a high fashion product): goods for mass consumption with a base quality level of 29-30 points, with increased quality level--31-40, and with especially high level of consumer qualities--41-50 points. The goods must be assigned one status or another only if it has all the qualities provided in the scale.



Moreover, approbation in the form of new products of the first experimental batch for the demand of the ultimate consumers must become a mandatory condition in assigning these goods the status of "improved quality". At the same time, with the high rate of renovation in assortment in light industry (for example, in 1985 for shoes it was updated by 92.3 percent, for tricot outerwear--by 80 percent, for sewn products--by 73, and for woven goods--by 70 percent), the temporary prices are essentially permanent fixed prices.

At the present time, the periods of effectiveness of a temporary price are quite long--18 months; while the transition to a permanent fixed price is practically impossible since the goods are removed from the assortment of manufactured products before this time has elapsed. Nevertheless, such an approach would not only facilitate the accelerated sale of goods, but would also weaken the process of raising prices for products in light industry. Due to the duration of effectiveness of temporary prices, in essence, the price does not take into consideration the stages of the product's life cycle, since the temporary price is the upper limit of prices for products in light industry for mass consumption. Therefore, after a product has passed the first experimental batch, it must be the initial stage of movement of prices toward products of mass consumption.

The untimely replacement of temporary prices with fixed prices also leads to the situation where in a number of cases it is necessary to establish not a permanent fixed price, but a reduced one. This is associated with losses to the budget. In our opinion, it would be expedient to differentiate the times of effectiveness of temporary prices depending on the rates of renovation of the assortment and the types of products (for example, the shortest for products [footwear] which are updated at a faster rate, and longer for goods (fabrics) characterized by lower rates of assortment update). However, in order to prevent prices from becoming an inhibiting factor in updating the assortment, they must be effectively set. Recently, much has been done in this direction. Standard-parameter price lists have been introduced for individual types of products in light industry. The rights for introducing temporary prices have been handed over to republic committees on pricing and to industrial enterprises (associations). As of 1980, contractual prices have been set for the first experimental batches and for high fashion goods.

At the present time, prices are effectively set generally for new products with increased consumer qualities. This, naturally, facilitates renovation of the assortment. However, as we know, the price must be not only a stimulus, but also a barrier, a hindrance to the output of goods which are not in demand. Therefore, effectiveness must be manifested in the timely setting not only of increased prices, but also markdowns. This must be done before the demand for the product begins to drop off as a result of its loss of aesthetic consumer qualities. We are speaking here of using the price as a forerunner of the dynamics of the product's consumer cost. Nevertheless, markdowns on outdated products are, as before, rarely set.<sup>3</sup>

Under the new conditions of economic management, the BSSR Minlegprom enterprises were given the right to set prices for the first experimental batches of new products. In 1984 they were ratified for 364 first experimental batches (294 by enterprises and 70 by the ministry). Almost 20 million rubles worth of products were produced, or about 0.3 percent of the overall volume of sales by BSSR Minlegprom enterprises. In 1985, prices were ratified for 338 first

experimental batches of new products, including up to 100,000 rubles--for 290 and up to 500,000 rubles--for 48. Thus, in two years the enterprises and the BSSR Minlegprom set prices for 702 new products, including enterprises--for 584 and the ministry--for 118 products.

In the course of the experiment it became apparent that the first experimental batches may generally have two types of prices: those ratified by producer enterprises, and contractual--upon agreement of the industrial and trade enterprises. In this case, the latter had additional profits. Yet at the same time the enterprises in industry and trade did not bear any mutual responsibility for the sale of the first experimental batches of the new product, even though provision had been made for this. However, increasing the trade discount, which was built into the structure of the contractual prices, made it possible to additionally stimulate the trade enterprises.

The inadequate development of the experiment's conditions in the sphere of price formation led to the situation whereby some enterprises often ratified only prices for standard mass produced products, and not for first experimental batches of new products. Sometimes obsolete model products were manufactured as experimental batches.

In our opinion, the price on an experimental batch of new products must precede the price set for mass produced products. In the course of realization of the first experimental batch, the possibility of conducting a sort of price approbation is created. In this connection, the level of the contractual price on the products in the first experimental batch must be as close as possible to the level subsequently set by the fixed price.

#### FOOTNOTES

1. Regarding the need for specifically such an approach in determining the standard price base, convincing conclusions are presented in the discussion of N. I. Chekhlov, A. A. Deryabin and A. A. Simonyan. (Cf.: "Thoughts on Prices", PLANOVoye KHOZYAYSTVO, 1986, No 8, p 60-61).
2. Marx, K., Engels, F. "Sochineniya" [Collected Works], Vol 23, p 184.
3. Cf.: PLANOVoye KHOZYAYSTVO, 1986, No 8, p 65-66.

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## COAL INDUSTRY TASKS UNDER NEW OPERATING CONDITIONS

Moscow UGOL in Russian No 1, Jan 87 pp 4-7

[Article by G. I. Nuzhdikhin, USSR Deputy Minister of the Coal Industry:  
"Tasks of the Coal Industry under the New Operating Conditions"]

[Text] In conformity with the decisions of the 27th CPSU Congress of April (1985) and the subsequent plenums of the CPSU Central Committee that defined the most important approaches to restructuring the management of the economy, the coal industry has been carrying out methodical work to prepare the industry for the conversion on 1 January 1987 to the new operating conditions. During these preparations a number of major economic measures were undertaken that were aimed at creating the necessary conditions to strengthen the impact of the economic mechanism on the improvement of industrial efficiency. For example, on 1 January 1986 a system of accounting prices for coal output was adopted by the industry that has enabled associations and enterprises to better organize cost accounting. The system of bonuses for workers has been substantially revised: their material stake in and responsibility for fulfillment of the plan for deliveries to customers has been strengthened and all associations have adopted a bonus system for workers based on fulfillment of the labor-productivity plan -- about half the bonus fund is targeted for these goals; and the responsibility of workers and managers for maintaining product quality in conformity with standards and specifications has been increased. Enterprise collectives have succeeded in strengthening labor and production discipline. Since 1986 three production associations, Gukovugol, Intaugol, and Krasnoarmeyskugol, have been working under the new operating conditions on an experimental basis. The accomplishment of these and other measures has enabled the industry to prepare economically for extensive conversion to the new operating methods and to decidedly improve its overall operations.

In the first year of the 12th Five-Year Plan the coal industry operated successfully -- in the first 11 months of 1986 the mines and open pits of the USSR Ministry of the Coal Industry mined 677.6 million tons of coal, fulfilled the plan by 102.3 percent, and produced an additional 15.4 million tons above plan. Compared to the corresponding period of 1985 coal mining increased by 22.3 million tons or 3.4 percent. This increase in mining was the greatest in recent years. The surface method of coal mining developed at a record pace and its share of total mining amounted to 42.9 percent.

The labor-productivity plan for the 11 months was fulfilled by 101.4 percent and attained a growth rate of 2.9 percent as compared with 1985. The collectives of 94 brigades are working at the pace of 500,000 tons or more of coal (or shale) mined per year and the brigade of V. M. Gvozdev of the Raspadskaya Mine of the Yuzhkuzbassugol Association, and the sector of A. P. Potapov of the Vorgashorskaya Mine of the Vorkutaugol Association considerably surpassed the one-million-ton mark. The initiative of these two collectives in considerably improving labor productivity was commended by the CPSU Central Committee.

For the first time in many years the USSR Ministry of the Coal Industry not only fulfilled its plan targets for the principal economic indicators but also considerably improved them in comparison to the corresponding period of the previous year. Production costs per ton of coal declined by 10 kopecks against plan and by 13 kopecks against actual costs for 1985. This achieved savings of 67.7 million rubles for the costs of the total amount of coal mined. The plan for profits was fulfilled by 110 percent, the industry's financial position was strengthened, and the material incentives fund increased.

The five-year plan for the economic and social development of the coal industry calls for mining 785.3 million tons of coal in 1990; achieving the entire increase in output by improving labor productivity; accelerating the development of the Kuznetsk, Ekibastuz, Kansk-Achinsk, and other coal mining basins of Eastern Siberia and the Far East; improving the technical level of production; and improving coal quality. These problems will be successfully solved by technical reequipping and the startup of newly built and reconstructed enterprises, together with the accomplishment of measures to improve the methods of economic management.

Under the new operating conditions the plan as the main instrument of implementing the party's economic policy is of increased importance. The main underlying principles for improving planning and increasing its role in the solution of the problems facing the industry are as follows:

- the limits of independence of associations and enterprises have been substantially broadened in the area of planning along with an increase in their responsibility for the final results of their work;

- on a base of stable economic norms associations and enterprises are in the position where labor collectives have an interest in improving product output and in the economical expenditure of production resources;

- a closer link has been established between compensation for labor and the end results of production, both in planning and when implementing the plan.

Putting these principles into practice has made it necessary to substantially limit the number of centrally approved indicators at all managerial levels of the industry. The number of these indicators and targets has therefore been cut back for all production associations by a factor of more than 2 in the 12th Five-Year Plan and the plan for 1987. This measure is aimed at creating conditions for locating reserves and developing initiative and socialist enterprise.

The leading role among planning indicators is allotted to established targets for the mining of coal and the output of products from the preparation of it. This is due to the fact that the centralized planning of product output in physical terms ensures balance and proportional development of the fuel industry and of the basic industries -- the consumers. Indicators of the volume of product output in value terms are used in planning for accounting purposes, and only the volume of production to be achieved is specified in annual plans at all levels of management to estimate fulfillment of the plan in accordance with contracts concluded and orders placed. Also included in the indicators specified are those describing the end results of the work of production collectives, efficiency, and quality of goods produced. Of special importance are targets for the technical development of production, reduction of the cost of producing goods and improvement of their quality, and the generic indicator -- profit.

Under the new operating conditions the role of the five-year plan has grown and has become the principal form of planning all the production-economic and social activities of collectives at all managerial levels of the industry. Deriving from this is the need for close coordination between the targets of the five-year plan and the current activities of enterprises and associations, as specifically detailed in annual plans.

Economic norms are called on to play the principal role in improving the soundness of plans and the stake of production collectives in developing and adopting more intensified annual plans on the volume of production, growth in labor productivity, reducing production costs, and improving other indicators. Under the new operating conditions norms are established by a higher-up organization, forwarded to associations and enterprises as part of the five-year plan, and not subject to further change. The following are the principal norms: setting the plan size for the wage fund; setting up economic incentives funds; apportioning profits between the state budget and the associations (or enterprises); and creating reserves of various types of resources in associations and enterprises. Also of great importance is the correlation between growth in labor productivity and the average wage.

In order to improve the scientific basis and balance of the plans for the economic and social development of the coal industry considerable work has been done to update and add to the system of advanced technical-economic standards and norms. For planning the mining and processing of coal and shale at all managerial levels there are presently in use about 300 groups of standards and norms that regulate the use of various types of resources. However, there are definite shortcomings in the organization and methodological support of the industry's system of norms. These relate mainly to the scientific basis for a normative report and the performance of the writer's supervision of its adoption and practical use in planning. Directly related to problems of standardizing the consumption of various resources is the development of measures to improve the system of keeping track of and monitoring their actual use.

The conversion of the industry to the new operating conditions should improve the operating efficiency of all economic incentives and levers, including eco-

conomic incentives funds. The role of the production development fund has therefore radically changed and grown as a source of financing for state investments to carry out measures for the technical reequipping and reconstruction of existing enterprises. These are carried out only with the resources of this fund, but if they are not adequate for these purposes, bank credits may be resorted to. Associations and enterprises have been given the opportunity to make independent use of part of the combined development fund for science and technology to carry out scientific research and planning and design work on their own initiative to accomplish technical reequipping.

In the 12th Five-Year Plan there has been a considerable increase in the formation of the production development fund, which will increase the opportunities for labor collectives to accelerate scientific and technical progress at existing enterprises.

All these measures have expanded the independence of associations (and enterprises) to carry out technical policy and increase the economic responsibility of associations' collectives for ensuring the required pace of production development and for increasing its efficiency.

The fund for social and cultural measures and housing construction are to play an important role in solving problems of the social development of labor collectives. No less than 50 percent of the resources of this fund are to be targeted for financing the construction of housing, dispensaries, children's facilities, pioneer camps, and other non-production facilities. The norms for formation of the fund for social and cultural measures and housing construction have been raised. Furthermore, with the agreement of the labor collectives, part of the resources of the material incentives fund may be diverted to the fund for social and cultural measures and used to finance the construction of housing and other social facilities.

For the enterprises and associations of the coal industry the procedures for the formation of the material incentives fund in effect in the 11th Five-Year Plan are generally being maintained. The methodology of forming them and their use as the fund-forming indicator of the volumes of total output have been proven in principle, and are an incentive for the fulfillment and over-fulfillment of five-year plans for this indicator.

However, a number of changes have been introduced into this methodology under the new operating conditions. The most substantive of them are as the following.

Incentive has been increased to fulfill the plan for deliveries -- an indicator that is highly important under the new operating conditions. Under the new provision an enterprise (or association) that has successfully fulfilled its plan for product output by fulfilling its delivery commitments, receives the right to increase its withdrawals from the material incentives fund by 15 percent. At the same time the penalty for non-fulfillment of the delivery plan became more stringent -- the norm for reduction in withdrawals went up to 3 percent for each percentage point the plan was underfulfilled. The experi-



ence of using this procedure in the three coal-mining production associations that converted to the new operating conditions in 1986 is evidence of the considerable increase in the economic stake of the collectives in fulfilling the delivery plan.

In order to reward and increase the responsibility of workers for improving the quality of output the industry's enterprises were for the first time granted the right to supplementary withdrawals in the amount of 50 percent of above-plan profits obtained as a result of additional payments obtained by improving the quality of coal shipped.

Associations (and enterprises) are allowed to set up a combined material incentives fund containing, in addition to the resources of the material incentives fund proper, resources for special bonus systems (for creating, developing, and adopting new equipment, for the effect of inventiveness and efficiency, for savings in specific types of material resources, etc.).

When setting up and using a combined material incentives fund, resources for bonuses may be distributed, depending on the tasks confronting the collectives of the associations (or enterprises), for growth in the volume and improvement in the efficiency of production and in the technical level and quality of the goods produced or for improvement in labor productivity. This will make it possible to utilize the material incentives funds available to associations (and enterprises) more efficiently and purposefully.

Under the new operating conditions the improvement of labor norms and compensation plays an important part. Provision has been made to expand the rights of enterprises so that they may use the wage fund to set up:

- differential increments to the wage scale for high occupational proficiency (up to 12 percent of the pertinent wage scale for workers in Category III, up to 16 percent for Category IV, up to 20 percent for Category V, and up to 24 percent for Category VI and above), paid out of savings in the wage fund;

- payments to highly qualified workers engaged in especially important and responsible work in an amount up to 350 rubles per month within the limits of the planned wage fund;

- differentials to unit managers, specialists, and white-collar workers in an amount up to 50 percent of their base pay for high achievements in labor or for the performance of especially important work (for the period it is being carried out) paid out of savings in the wage fund of the appropriate categories of workers;

- additional payments to workers in various personnel categories who hold more than one job (or duty) without higher organizations having to approve the list of combined jobs (or duties); and

- additional payments to workers, foremen, chiefs of sectors and shops, and other specialists and white collar workers for working under hazardous conditions.

Associations and enterprises have been granted more extensive rights in the area of worker incentives. With the agreement of the trade union committee they may independently develop and approve provisions for bonuses for the

principal results of economic activities by groups: workers; designers, technologists, and scientists; workers of the technical control service; and other workers, specialists, and white-collar workers. Associations and enterprises determine the indicators and amounts of bonuses for workers on the base of the specific conditions and tasks confronting the respective structural components.

It is admittedly necessary to convert to bonus payments to the collective of a brigade or structural component (sector, shop, department) as a whole (while setting maximum amounts for them). Payments to brigade members are awarded differentially within the limits of the total bonus fund in accordance with their personal contribution to the total work results and are not limited by maximum amounts.

The USSR Ministry of the Coal Industry will approve bonus provisions only for the managerial personnel of associations and enterprises. For fulfilling the plan for the volume of goods produced under contract bonuses are paid in an amount not less than 50 percent of the total bonus amount for the principal results of economic activities.

The new operating conditions increase the role of cost accounting to improve the organization of labor and production, ensure high quality of operations, and economize on materials and energy. Enterprises, sectors, shops, and brigades may be converted to cost accounting. Under present-day conditions brigade cost accounting and the brigade contract have assumed great importance. The number of brigades operating under cost accounting increased substantially during the 11th Five-Year Plan. Where in 1981 there were 1,814 of these brigades in the USSR Ministry of the Coal Industry or 5.1 percent of their total number, there were 6,324 at the beginning of 1986 or 13 percent of the total. Among the best are I. Z. Sofronov's stoping brigade of the No. 1 Voroshilovgradskaya Mine of the Voroshilovgradugol Association, B. F. Avdeyev's tunnelling brigade of the Zubovskaya Mine of the Novomoskovskugol Association, and many others.

The number of brigades is increasing that are comprised of workers paid by the hour and engineering and technical personnel. As of 1 January 1986 there were 207 of these brigades operating within the USSR Ministry of the Coal Industry and 112 in the Kuzbassugol VPO [All-Union Production Association].

At the open pits of the Kemerovougol and Yakutugol associations consolidated collectives have been set up to combine excavator and truck brigades working jointly toward the same end result (volume of overburden stripped and hauled). Setting up these brigades has considerably helped to reduce excavator downtime caused by lack of truck transport.

The adoption of new highly-productive equipment, advanced technology, and the rational organization of production and the dissemination of advanced methods of labor make it necessary to continually improve the system of standards. Output standards as an element of the economic mechanism are intended to stimulate the search for reserves to increase labor productivity and to create material incentives to improve productive efficiency.

In recent years considerable work has been done in the coal industry to improve the level of standards and to develop technically based basin standards for output. In the "coal mining" subsector 97.2 percent of the workers are covered by labor standards and 99.4 percent of the pieceworkers are on technically based standards that are being fulfilled by an average of 106 percent.

Labor standardizing must be improved at coal machine building plants. Only 31.6 percent of their hourly paid workers are covered, 38.9 percent of the standards are empirical-statistical, and the labor of 76.8 percent of pieceworkers are on technically based standards.

The following are the main approaches to further improving labor standardizing in the coal industry:

- developing and employing consolidated comprehensive output standards for mining operations and bringing them into line with the terms for the employment of the brigade form of labor organization. This will facilitate maximum concentration on the end results of brigade operations, classification by type of the process component of a standardized operation, and standardization of the volumes of work for individual processes. Consolidated comprehensive standards for basins and associations have been completed and in 1987 they will be adopted at the mines, which will make it possible to employ standards of varying stress for various workplaces and to reduce standardized labor requirements for operations; and

- developing common industry output standards for pieceworkers and norms for the numbers of hourly paid workers.

In preparing for conversion to the new operating conditions the USSR Ministry of the Coal Industry, the associations, and the enterprises have set up special commissions, carried out the necessary organizational measures, conducted training and briefing at all levels of management and in workers' collectives, and issued posters and booklets.

Developed, approved, and forwarded to the associations and enterprises are provisions on norms for setting up the wage fund; on procedures for setting up and utilizing the funds for material incentives, sociocultural measures, and housing construction, the combined material incentives fund, and the fund for developing production; and on procedures for setting up and utilizing the finance reserve and for distributing profits. A Collection of Methodological Documents on the New Operating Conditions in the Coal Industry was published.

The industrial associations operating under the new conditions in 1986 attained quite high results in their economic activities. The plan for the volume of production was overfulfilled, labor productivity increased, production costs of output decreased, and the profit plan was considerably overfulfilled. All the associations fulfilled their contract commitments for coal delivery.

The rights accorded to associations under the new conditions have made it possible to substantially increase the economic incentives fund. In fact the

extra fund for material incentives increased by nearly one third. About one half of the funds for sociocultural measures and housing construction have been targeted for investment, mainly for housing construction.

Specific work has been undertaken to improve cost accounting. In the Intaugol Association, for example, they have developed and adopted Regulations on Intra-Industry Cost Accounting, which reflect the requirements of the new operating conditions. They regulate economic relations within the association and within all of its structural components. The Regulations provide an abbreviated list of the approved indicators of five-year and annual plans, procedures for concluding in-house agreements and reviewing disputes that arise, and a record of the fulfillment of targets and delivery commitments, it regulates procedures for the material-technical supply of mines, plants, concentration plants, and other components, and it monitors the expenditure of the wage fund. It defines procedures for converting brigades to cost accounting, delivering plan indicators to collectives, recording actual costs, and establishing a brigade's personal account.

Wider use has been made of the right granted to enterprises to reward high vocational skills and the holding of more than one job.

Out of above-plan profits associations have set up a financial reserve that has increased the financial stability of the enterprises. In the Kransnoarmeyskugol Association, for example, this reserve has covered shortages of in-house working capital.

Certain enterprises of the Gukovugol Association (the Antratsit mines imeni 60th Anniversary of the Komsomol and imeni 50th Anniversary of October) used the rights granted them to transfer, with the agreement of the labor collective, part of the material incentives fund to reward operations important to these enterprises, which are being performed under contract by other organizations.

However, the associations operating under the new conditions have not fully utilized opportunities for improving the results of their production and economic activities. Not all the workers in the enterprises or even in association management have assimilated the content of the new conditions, and workers in the technical and production services and in capital construction have not been actively enough involved in restructuring the economic mechanism.

Despite the reduction in approved plan indicators, estimating indicators were sent to associations and enterprises. Full use was not made in the past year of the right of associations to utilize the production development fund or the combined fund for developing science and technology.

In a number of cases there has been a formal approach to the adoption of cost accounting because of inadequacies in setting standards for material resources and accounting for them as well as in incentives for cost accounting results. There has been insufficient use made of the right granted to enterprises to reward savings in material resources. Work is still progressing too slowly in

disseminating advanced forms of organizing and compensating labor and incorporating hourly paid workers and specialists into brigades.

When converting the entire industry to the new operating conditions the shortcomings noted must be eliminated in rapid order. Not only the economic but also the technical services must be involved in this at every level of management.

Special attention must be paid to carrying out measures that provide for:

- organizing the technological and economic preparation of production in order to create the conditions necessary to make full use of the advantages of the new operating methods and accelerate the economic and social development of the workers' collectives;
- consistent and strict observance of the new provisions in the area of planning and improvement in the degree of soundness of plans by broadly employing advanced standards and norms;
- effective employment of economic levers and incentives to ensure one-hundred-percent fulfillment of plans for the delivery of goods to customers, growth in labor productivity, and rational use of production resources;
- systematic introduction of the new wage system;
- consistent application of the principles of paying from internal resources and of self-financing;
- in-depth study by workers in all categories of the new operating methods.

Successful adoption by the industry's associations and enterprises of the new operating methods will facilitate further improvement in coal industry operations.

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## COAL INDUSTRY FIGURES FOR 1986 GIVEN

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[Article: "The USSR Coal Industry in 1986"]

[Text] In putting the decisions of the 27th CPSU Congress into effect the collectives of the coal industry's enterprises have considerably improved their work, as a result of which the industry fulfilled plans in 1986 for the main technical-economic indicators. The annual plan for coal output was fulfilled ahead of time -- on 24 December.

Mine and open-pit workers mined 742.2 million tons of coal (16.1 million tons above plan) and exceeded the 1985 level by 24.2 million tons or 3.4 percent. This is the first time in 20 years that such an increase in output was achieved.

All the country's main basins increased their coal output. Good work was done by the collectives of the following associations: Vorkutaugol, Intaugol, Gukovugol, Severokuzbassugol, Chelyabinskugol, Dalvostugol, Krasnoarmeyskugol, Pavlogradugol, Donetskugol, Oktyabrugol, Sverdlovantratsit, and Voroshilovgradugol.

Data on coal mined in 1986 for the main basins and methods of mining are shown in Table 1.

However, the following associations did not fulfill the plan for coal output: Bashkirugol, Primorskugol, Sakhalinugol, Propkopyevskugol, Kiselevskugol, Stakhanovugol, and Aleksandriyugol.

The surface method of working coal fields continued to develop at a record pace and accounted for more than 60 percent of the total increase in coal mined. By the surface method 318.2 million tons of coal were mined, which amounted to 42.9 percent of the total output, as opposed to 41.9 percent in 1985. The volume of overburden operations at open pits increased by 136.5 million m<sup>3</sup> or 11.8 percent, which made it possible to increase prepared reserves by 9 million tons (10.1 percent) and reserves ready for extraction by 3.8 million tons (11.8 percent).



Coal processing plants processed 324.4 million tons of run-of-the-mine coal and produced 181.5 million tons of concentrate. In comparison with 1985 the volume of coal processed increased by 13.1 million tons or 4.2 percent and production of concentrate by 6.6 million tons or 3.8 percent. The output of coarse- and medium-grade coal amounted to 77.4 million tons, including 26.7 million tons of anthracite (Table 2).

The ash content of coal mined was reduced by 0.1 percent from the 1985 level and the ash content of coal shipped was 0.1 percent below norm or 0.2 percent lower than the year before.

In 1986 386.3 million tons of coal were mined from working faces, of which 285.7 million tons were mined by mechanized units, and the proportion of output from these units was 74 percent, versus 73.1 percent in 1985. The daily loading at an operating working face increased by 16 tons or 4.1 percent and amounted to 405 tons for the USSR Ministry of the Coal Industry (Table 3), and at a mechanized-unit face it amounted to 652 tons (an increase of 3.7 percent).

The daily loading at a mechanized-unit face was over 1,000 tons in the following associations: Vorkutaugol, Intaugol, Leninskugol, Yuzhkuzbassugol, Gidrougol, Severovostokugol, and Yakutugol. The employment of efficient stripping excavation was started in the Karaganda and Kuznetsk basins.

Further mechanization of preparatory operations was achieved. The plan for the accomplishment of preparatory work (including overburden and preliminary work) was overfulfilled. The mechanized loading of coal and rock involved 4,307 km of preparatory work (Table 4), of which 2,278.3 km was done by combines. The level of mechanized loading of coal and rock during preparatory work amounted to 84.6 percent, of which 44.7 percent was by combines (the corresponding figures in 1985 were 83.2 percent and 43.1 percent).

Work was undertaken to supply open pits and mines with advanced equipment. Deliveries to mines increased of the KMT, KD-80, and 1KM-103 mechanized units, which are on the world level. Series production was introduced of the 1MK-88S prop and of the US-3 scraper-stripper.

In preparatory work the area of use was expanded of the new medium type 4PP-2M combines and loading machines with a side-dumping bucket.

The average monthly labor productivity per worker of coal mined in 1986 amounted to 67.4 tons (Table 5) and increased by 2 tons or 3.1 percent over the 1985 level. Ninety-two percent of the increased output was due to growth in labor productivity.

One of the elements in the improvement of the industry's work is the conversion of the associations to the new operating conditions. In 1986 the collectives of the Intaugol, Gukovugol, and Krasnoarmeyskugol associations, which were operating under the new operating conditions, increased the efficiency of their production and accelerated scientific and technical progress.

In a number of associations, however, restructuring is not going on at an adequate pace and there is no strict monitoring over the quality of output and the observance of technological discipline. There is still too much working time wasted. The quality of new machinery is not always up to contemporary requirements. The load on the high technology mechanized units operating in mines is not exceeding 50-70 percent of capacity, while the cost of the new equipment substantially exceeds the cost of what it replaced. This is having a negative effect on the economic indicators of the industry's operations.

Last year the plan was underfulfilled for one of its principal indicators -- matching output to delivery commitments (99.2 percent). Preparation of the working front is lagging and the average operating length of working faces declines annually. The capital construction plan was not fulfilled and in this connection several social problems were left unsolved. Shortcomings in the operations of coal mine machine building were not eliminated.

The work of expanding advanced forms of organizing labor continued in 1986. The certification of workplaces was carried on at industrial enterprises. There was further dissemination of consolidated integrated brigades made up of hourly paid workers and engineering and technical personnel. Many brigades are operating on cost accounting principles.

Considerable success was achieved by pacemakers in socialist competition -- the collectives of the brigades and sectors headed by V. M. Gvozdev, A. P. Potapov, O. B. Bobrov, Yu. P. Maksimov, V. V. Yelagin, B. P. Starunov, N. I. Gladkikh, and V. S. Kuznetsov (Table 6). Each of these brigades mined more than 1 million tons of coal, and the brigade of V. N. Gvozdev brought up 1.52 million tons of coal. The collectives of 389 brigades or sectors loaded more than 1,000 tons of coal (or shale) per day per working face. They accounted for about 43 percent of the total output of operating working faces.

Accelerated preparatory work was being done by 604 brigades, which drove 1,623.8 km of mine workings.

Standards for increased productivity in overburden and dumping operations were met by 956 excavator and transport brigades. The collectives of 103 stoping brigades mined 500,000 tons or more of coal (or shale) per year.

The outstanding collectives were able to achieve high technical and economic indicators as a result of efficient use of mining equipment, good engineering preparations for production, adoption of the advanced brigade form of labor organization, expansion of material incentives for the end results of work, accomplishment of measures to increase technological and production discipline, and reduced loss of working time.

Table 1.

1 Минуглепром СССР, бассейн, способ добычи	2 Добыча угля, тыс. т			
	3 план	4 фактически	5 % к плану	6 % к уровню 1985 г.
7 Минуглепром СССР	726 070	742 182	102,2	103,4
8 Донецкий	193 750	200 614	103,5	101,8
9 Кузнецкий	145 500	147 384	101,3	104,2
10 Карагандинский	49 250	51 185	103,9	102,7
11 Печорский	28 660	30 174	105,3	101,3
12 Подмосковный	18 500	18 910	102,2	98,2
13 Канско-Ачинский	43 050	43 476	101,0	106,7
14 Экибастузский	83 900	85 729	102,2	106,6
15 Подземный	413 381	424 006	102,6	101,9
16 Открытый	312 689	318 202	101,8	105,4

## Key:

1. USSR Ministry of the Coal Industry, basin, and method of mining
2. Coal mined, in thousand tons
3. Plan
4. Actual
5. Percent of plan
6. Percent of 1985 level
7. USSR Ministry of the Coal Industry
8. Donetsk
9. Kuznetsk
10. Karaganda
11. Pechora
12. Podmoskovnyy
13. Kansk-Achinsk
14. Ekibastuz
15. Underground
16. Surface

Table 2.

Показатель 1	2 План, тыс. т	3 Фактически, тыс. т	4 % к плану	5 % к уровню 1985 г.
6 Переработка рядовых углей на ОФ Минуг- лепрома СССР	315 285	324 407	102,9	104,2
7 Выпуск концентрата	175 666	181 500	103,3	103,8
8 Выпуск углей круп- ных и средних клас- сов	75 420	77 433	102,7	104,3
9 В том числе антраци- тов	25 867	26 722	103,3	102,0

## Key:

1. Indicator
2. Plan, in thousand tons
3. Actual, in thousand tons
4. Percent of plan
5. Percent of 1985 level
6. Processing of run-of-mine coal  
at USSR Ministry of the Coal  
Industry OF [processing plants]
7. Output of concentrate
8. Output of coarse- and medium-grade  
coal
9. Including anthracite

Table 3.

Показатель 1	Минугл. пром СССР 2	Бассейн 3				
		Донецкий 4	Кузнецкий 5	Карагандин- ский 6	Печорский 7	Подмосков- ный 8
9 Число действующих очистных забоев на 1 января 1987 г.	2864	1721	416	134	75	102
10 Среднедействующая линия очистных забоев, км	368	265	32,3	14,6	10,2	6,9
11 Среднемесячное продвижение линии действующих очистных забоев, м	37	33,5	50,9	52,2	68,4	49,1
12 Среднесуточная добыча из одного очистного забоя, т	405	316	560	898	1087	465
13 В том числе из комплексно-механизированного забоя, т	652	511	963	917	1151	468

## Key:

1. Indicator
2. USSR Ministry of the Coal Industry
3. Basin
4. Donetsk
5. Kuznetsk
6. Karaganda
7. Pechora
8. Podmoskovnyy
9. Number of operating working faces as of 1 January 1987
10. Average operating line of working faces, in kilometers
11. Average line of operating working faces driven per month, in kilometers
12. Average daily output per working face, in tons
13. Including output from mechanized-unit faces, in tons

Table 4.

1	2 Объем проведения подготовительных выработок, км		5 Проведение подготовительных выработок с механизированной погрузкой угля и породы, км		Уровень механизированной погрузки угля и породы, %	
	3 всего	4 в том числе вскрывающих и подготовляющих	3 всего	6 в том числе комбайнами	3 всего	6 в том числе комбайнами
8 Минуглепром СССР, бассейн	5976,1	4139,2	4307,0	2278,3	84,6	44,7
9 Донецкий	3002,7	2043,4	2173,9	759,2	82,2	28,7
10 Кузнецкий	1489,3	934,5	939,7	592,1	85,3	53,7
11 Карагадинский	359,4	313,3	348,5	324,8	97,6	91,0
12 Печорский	196,8	175,0	183,5	163,4	96,3	85,7
13 Подмосковский	175,5	159,1	146,0	146,0	83,2	83,2

## Key:

1. USSR Ministry of the Coal Industry and basin
2. Volume of preparatory workings driven, in kilometers
3. Total
4. Including overburden and preliminary work
5. Preparatory work accomplished with mechanized loading of coal and rock, in kilometers
6. Including that by combines
7. Level of mechanized loading of coal and rock, %
8. USSR Ministry of the Coal Industry
9. Donetsk
10. Kuznetsk
11. Karaganda
12. Pechora
13. Podmoskovnyy



Table 5.

Минуглепром СССР, бассейны 1	Среднемесячная производительность труда рабочего по добыче угля, т 2		
	всего 3	на шахтах 4	на разрезах 5
Минуглепром СССР	67,4	41,9	425,5
7 Донецкий	31,7	31,7	—
8 Кузнецкий	85,6	59,0	277,2
9 Карагандинский	82,5	72,5	471,5
10 Печорский	79,2	79,2	—
11 Подмосковский	67,4	59,7	228,3
12 Канско-Ачинский	829,6	—	829,6
13 Экибастузский	831,6	—	831,6

## Key:

1. USSR Ministry of the Coal Industry and basin
2. Average monthly productivity per worker for coal mined, in tons
3. Total
4. At mines
5. At open pits
6. USSR Ministry of the Coal Industry
7. Donetsk
8. Kuznetsk
9. Karaganda
10. Pechora
11. Podmoskovnyy
12. Kansk-Achinsk
13. Ekibastuz

Table 6.

Объединение, шахта, фамилия бригадира (начальника участка) 1	Фактическая добыча угля 2		Фактическая среднесуточ- ная произво- димость рабо- чего, т 5	Длина лавы, м 6	Мощность пласта, м 7	Оборудование 8
	общая, тис. т 3	среднесуточ- ная, т 4				
9 «Воркутауголь»						
10 «Воргашорская», Потапов А. П.	1654,0	4672	1083	241	3,2	ОКП 11
12 «Воргашорская», Бобров О. Б.	1058,7	3051	798	124	3,2	ОКП
13 «Воркутинская», Бронников Ю. П.	683,0	1997	386	142	2,6	ОКП
14 «Воркутинская», Александров А. Е.	801,0	2244	566	159	2,7	ОКП
15 «Комсомольская», Боровой А. И.	662,6	2058	690	95	3,5	2УКП 16
17 «Октябрьская», Баранов В. Н.	712,5	2269	761	142	3,2	ОКП
18 «Центральная», Бурков В. Н.	739,6	2119	661	119	4,0	2УКП
19 «Интауголь»						
20 «Интинская», Попов В. Н.	767,0	2155	765	142	2,7	1ОКП-70 21
22 «Капитальная», Гуменный Н. С.	631,5	1769	498	185	1,9	КМ-87УМН 23
24 «Капитальная», Тримаруш В. Г.	597,8	1712	558	140	2,6	1ОКП-70
24б «Западная», Ярош Е. Е.	591,6	1676	1202	122	3,1	2ОКП-70 25
26 «Гуковуголь»						
27 Им. 50-летия Октября, Максимов Ю. П.	1195,0	3338	539	194	1,5	КМ-87П 28
29 Им. 60-летия Ленинского комсомола, Кузьмен- ков В. А.	790,7	2215	545	199	1,2	«Донбасс» 30
31 «Ростовуголь»						
32 «Майская», Чих М. П.	856,3	2399	311	172	1,0	1МКСУ 33
34 «Ленинскуголь»						
35 Им. Кирова, Масленников П. П.	600,0	1824	741	90	2,4	1ОКП-70
36 «Комсомолец», Путков Р. Ф.	599,3	1674	694	125	2,8	2ОКП-70
37 «Полысаевская», Жуков В. М.	628,2	1795	770	121	3,0	«Пиома» 38
39 «Октябрьская», Елагин В. В.	1026,3	3028	1205	237	3,4	2ОКП-70
40 «Южубассууголь»						
41 Им. 60-летия СССР, Абабков В. Н.	713,6	1999	865	112	2,8	2ОКП-70
42 «Абашевская», Владимиров В. М.	600,8	1681	756	137	2,9	2ОКП-70
43 «Капитальная», Старунов Б. П.	1009,1	2627	544	160	1,7	КМТ 44
45 Им. Ленина, Кузнецов В. Ф.	708,2	1989	764	107	3,0	КМ-130 46
47 «Распадская», Гвоздев В. М.	1513,7	4240	1587	150	4,2	4КМ-130 48
49 «Гидроуголь»						
50 «Нагорная», Куртуков М. В.	801,4	2245	707	134	3,7	«Пиома»
51 «Нагорная», Дроздецкий Е. И.	694,8	2693	885	120	3,0	2ОКП-70
52 «Челябинскуголь»						
53 «Коркинская», Чуриков Н. Н.	514,2	1436	263	126	3,1	КМ-81 54

Table 6 (contd).

Объединение, шахта, фамилия бригадира (начальника участка)	Фактическая добыча угля		Фактическая среднемесяч- ная произво- димость трудо- рабочего, т	Длина лавы,	Мощность пласта,	Оборудование
	общая, тыс. т	среднесуточ- ная, т				
1	3	4	5	6	7	8
55 «Карагандауголь»						
56 «Северная», Ромашюта А. К.	597,9	1675	514	150	3,4	КМ-130
57 Им. Кирова, Васильев П. А.	566,1	1586	684	172	3,8	КМ-130
58 Им. Горбачева, Белик В. И.	635,5	1780	496	133	3,5	КМ-81Э 59
59а Им. 50-летия Октябрьской революции, Украинцев В. П.	611,8	1733	516	162	4,0	«Пионер»
60 «Шахтинская», Гладких Н. И.	1098,0	3076	535	90	4,2	30КП-70 61
62 «Сокурская», Кулицкий О. И.	725,1	2139	498	150	3,6	КМ-130
63 Им. 50-летия СССР, Острук В. И.	619,3	1735	480	140	3,3	КМ-81Э
64 «Донецкуголь»						
65 Им. Засядько, Негруца П. С.	554,8	1554	314	260	1,6	КМ87-1УМА 66
67 «Красноармейскуголь»						
68 Им. Стаханова, Ляшок А. И.	690,5	1962	455	270	2,0	КМ-87УМ 69
70 «Краснолиманская», Игнатьев В. И.	732,0	2051	534	250	2,3	КМ-87УМ
71 «Краснолиманская», Кузнецов В. С.	1008,2	2824	727	309	2,4	КМ-87УМ
72 «Добропольскуголь»						
73 «Белозерская», Пашкевич Д. И.	669,7	1886	279	214	1,6	КМ-87УМН 74
75 «Ровенькиантрацит»						
76 Им. Вахрушева, Филев И. Т.	628,4	1761	499	275	1,5	КМ-87П 77
78 «Краснодонкуголь»						
79 «Молодогвардейская», Колесников А. Я.	778,1	2174	633	160	1,9	2КМТ 80
81 «Ореховская», Дорошко М. К.	567,2	1571	508	200	1,7	КМ-87УМН 82
82 Им. Лютикова, Преор П. Д.	580,6	1613	293	200	1,0	КМС-97 84
85 «Сасрдовантрацит»						
86 Им. 60-летия СССР, Ковальчик В. С.	508,8	1441	393	198	1,3	КМ-88 87
88 «Украинауголь»						
89 № 8 «Великомостовская», Акимов А. А.	614,0	1730	764	161	1,2	КМ-88
90 «Эстонсланец»						
91 «Таммику», Миткевич И. Ф.	545,0	2080	1747	267	2,9	1ПНБ-2 92
93 «Ахтме», Иванов В. К.	603,0	2310	1634	302	2,8	1ПНБ-2
94 «Эстония», Балыченко М. П.	600,1	2299	1870	311	2,8	1ПНБ-2
95 «Эстония», Яуп Т. О.	584,0	2238	2049	264	2,8	1ПНБ-2

## Key:

1. Association, mine, name of brigadier (or sector chief)
2. Coal actually mined
3. Total, in thousand tons
4. Daily average, in tons
5. Actual average monthly labor productivity per worker, in tons
6. Length of longwall
7. Formation thickness, in meters
8. Equipment
9. Vorkutaugol
10. Vorgashorskaya, A. P. Potapov
11. OKP
12. Vorgashorskaya, O. B. Bobrov
13. Vorkutinskaya, Yu. P. Bronnikov
14. Vorkutinskaya, A. Ye. Aleksandrov
15. Komsomolskaya, A. I. Borovoy
16. 2UKP
17. Oktyabrskaya, V. N. Baranov

18. Tsentralnaya, V. N. Burkov
19. Intaugol
20. Intinskaya, V. N. Popov
21. 1OKP-70
22. Kapitalnaya, N. S. Gumenny
23. KM-87UMN
24. Kapitalnaya, V. G. Trimarush
- 24b. Zapadnaya, Ye. Ye. Yarosh
25. 2OKP-70
26. Gukovugol
27. Imeni 50th Anniversary of October, Yu. P. Maksimov
28. KM-87P
29. Imeni 60th Anniversary of the Komsomol, V. A. Kuzmenkov
30. Donbas
31. Rostovugol
32. Mayskaya, M. P. Chikh
33. 1MKSU
34. Leninskugol
35. Imeni Kirov, P. P. Maslennikov
36. Komsomolets, R. F. Putkov
37. Polysayevskaya, V. M. Zhukov
38. Pioma
39. Oktyabrskaya, V. V. Yelagin
40. Yuzhkuzbassugol
41. Imeni 60th Anniversary of the USSR, V. N. Ababkov
42. Abashevskaya, V. M. Vladimirov
43. Kapitalnaya, B. P. Starunov
44. KMT
45. Imeni Lenin, V. F. Gvozdev
46. KM-130
47. Raspadskaya, V. M. Gvozdev
48. 4KM-130
49. Gidrougol
50. Nagornaya, M. V. Krutukov
51. Nagornaya, Ye. I. Drozdetskiy
52. Chelyabinskugol
53. Korkinskaya, N. N. Churikov
54. KM-81
55. Karagandaugol
56. Severnaya, A. K. Romanyuta
57. Imeni Kirov, P. A. Vasilev
58. Imeni Gorbachev, V. I. Belik
59. KM-81E
- 59a. Imeni 50th Anniversary of the October Revolution, V. P. Ukraintsev
60. Shakhtinskaya, N. I. Gladkikh
61. 3OKP-70
62. Sokurskaya, O. I. Kulitskiy
63. Imeni 50th Anniversary of the USSR, V. I. Ostruk
64. Donetskugol
65. Imeni Zasyadko, P. S. Negrusha
66. KM87-1UMA

67. Krasnoarmeyskugol
68. Imeni Stakhanov, A. I. Lyashok
69. KM-87UM
70. Krasnolimanskaya, V. I. Ignatyev
71. Krasnolimanskaya, V. S. Kuznetsov
72. Dobropolyeugol
73. Belozerskaya, D. .I. Pankevich
74. KM-87UMN
75. Rovenkiantratsit
76. Imeni Vakhrushev, I. T. Filev
77. KM-87P
78. Krasnodonugol
79. Molodovogvardeyskaya, A. Ya. Kolesnikov
80. 2KMT
81. Orekhovskaya, M. K. Doroshko
82. KM-87UMP
83. Imeni Lyutikov, P. D. Preor
84. KMS-97
85. Sverdlovantratsit
86. Imeni 60th Anniversary of the USSR, V. S. Kovalchik
87. KM-88
88. Ukrzapadugol
89. No. 8 Velikomostovskaya, A. A. Akimov
90. Estonslanets
91. Tammiku, I. F. Mitkevich
92. 1PNB-2
93. Akhtme, V. K. Ivanov
94. Estoniya, M. P. Balychenko
95. Estoniya, T. O. Yaup

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